A COMPARISON OF THE EFFECTIVENESS OF TREATMENTS FOR POSTNATAL DEPRESSION, WITH THE INCLUSION OF MEN

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This thesis is presented as partial fulfilment of the degree of

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DECLARATION

I declare that this thesis is my own account of my research and contains as its main content work, which has not previously been submitted for a degree at any other tertiary education institution.

[Signature]

Sarah Jane Davey
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Finally, I dedicate this work to my parents and grandparents who nurtured a love of learning, and taught me to be inquisitive about human behaviour.
ABSTRACT

Postnatal depression (PND) is a serious and debilitating condition that disrupts women's lives at a time when they are already under stress, adapting to the substantial demands having a baby creates. PND is linked with adverse effects on the development of the child and the family system, including poor marital adjustment and elevated levels of depression in male partners. Implications, not only for men's health, but also for the amount and quality of support men can provide for their partners and children are far-reaching. Preventative programmes for the treatment of PND have been widely advocated, but are rare in the literature. Even fewer, are treatment programmes that include male partners. This study compared the efficacy of a structured Cognitive Behavioural Therapy (CBT) programme for the treatment of PND, delivered in 3 different ways, within an Australian semi-rural/coastal community. Thirty-nine women, diagnosed with PND, completed 10 weeks of either 'individual' (n=9), 'group women only' (n=16) or 'group partners involved' (n=14) intervention and were compared with a control support group (n=7). Pre-intervention, women in the study reported the presence of a number of psychosocial risk factors for PND and almost 20% of the men in this sample were also depressed according to the BDI-II. Partners of the women in the 'group partners involved' treatment completed a 6-week CBT group programme especially designed for men (n=13). Partners of the women involved in the other interventions acted as a control group (n=16). Depression, anxiety, parenting stress, relationship adjustment and social support measures were taken using standardized instruments at pre-intervention, post-test and at 3- and 6-month follow-up. Qualitative information about the experiences of PND and the intervention programme was obtained through focus group interviews. The intervention programme was evaluated by questionnaire by both participants and their general practitioners or allied health professionals who had referred them to the programme. Results indicated that, overall, the 10-week, structured CBT programme was far more effective in treating PND than attending a support group. Over time, group therapy outperformed individual therapy for depression and anxiety. Including partners in intervention meant significantly improved outcomes at 6-month follow-up for depression, anxiety and relationship adjustment for women. When male partners were included, women's social support levels were significantly higher at 3-month follow-up. Post-intervention men who participated in the men's group were significantly less depressed and stressed, and showed higher levels of social support than controls. The intervention programme was rated highly by both participants and referrers for effectiveness and acceptability, with the psychoeducational information and CBT strategies rated as the most useful components. Participants viewed the inclusion of male partners in PND treatment as fundamental and strongly recommended increased community and professional awareness of PND and its consequences. The important implications for clinical practice and resource allocation raised by this study are addressed.
CHAPTER 1

INTRODUCTION

"I was much further out than you thought,
And I was drowning, not waving"

Stevie Smith, British Poet (1964)

This quote could be said to encapsulate the experience of postnatal depression for too many women. Postnatal depression (PND) is commonly unanticipated, often unrecognized and underestimated, and more often than not, untreated.

This is a study about evaluating an applied psychological treatment for women with PND. It does this with an important twist. The intervention is delivered in 3 different ways, and women's male partners participate in an intervention especially designed for fathers.

OVERVIEW OF CHAPTER

This introduction begins by defining and describing what PND is, where it fits amongst other maternal mood disorders, and how it impacts on women. A summary of the diagnostic classification debate is provided because of its relevance to the status of treatment interventions for PND. Aetiological theories for the development of PND are described. Extensive research has been undertaken on risk factors for PND, this is reviewed because these provide hints on areas to target in treatment. The transition to parenthood is reviewed and some common assumptions are investigated. The findings of research into the effects of PND on children and partners are considered, as these effects provide major impetus for effectively treating the disorder. The varieties of treatment modalities that have been applied to PND are critiqued. A brief summary of programme evaluation techniques in relation to PND treatment is provided. The introduction concludes with this study's aims and hypotheses.

1.1 POSTNATAL DEPRESSION

Postnatal or postpartum depression (PND) is the most common mood disorder associated with childbirth. It is a clinical term referring to major unipolar depression occurring at any
time within the first postnatal year (Holden, 1991; Kowalenko, Barnett, Fowler & Matthey, 2000; NHMRC, 2000; O'Hara, 1995). This definition is commonly used in both clinical and research practice, however, two main classification systems for mental disorders specify slightly different onset times (Pope & Watts, 1996; Wisner, Peindl, Gigliotti & Hanusa, 1999).

The Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) (American Psychiatric Association, 1994) and the International Classification of Diseases (ICD-10) (World Health Organization, 1992) provide a separate classification for PND as distinct from its non-puerperal counterpart.

DSM-IV allows the addition of a 'postpartum-onset specifier' for patients within four weeks of delivery (American Psychiatric Association, 1994). ICD-10 allows a classification of 'depressive disorder with puerperal onset' when the onset was within 6 weeks of the birth, and where the depressive disorder cannot be classified elsewhere (Epperson, 1999; World Health Organization, 1992).

Although it is sometimes asserted within the community that PND is a new, 21st-century phenomenon, reports of mental illness in the postpartum period date back to the writings of Hippocrates in the 4th century BC (Taylor, Adams & Glover, 1994).

The first recorded specific study of the area is attributed to Marce in 1858 (Taylor, et al, 1994). Marce suggested that post partum psychiatric illness was a distinct diagnostic grouping with unique psychopathology and outcome. This view proved to be controversial at the time, and this argument has continued into modern day. The issues resurfaced when modern systematic research began in the 1960's with Pitt's study finding a 10.8% PND rate in a study of 300 mothers (Pitt, 1968).

Controversy over classification or definition, onset time and measurement leads to difficulties and confusion in interpretation of the research literature (O'Hara & Zekoski, 1988). Perhaps more importantly, it makes it difficult for the general public to differentiate what are 'normal' physical and psychological changes after childbirth and what is 'abnormal'. Cox (1988; 1994) suggests that there is confusion of the terms in the literature
and in common parlance, with the term 'Postnatal Depression' being used not only as a formal psychiatric diagnosis but also as a 'folk' label to describe any psychological difficulty after childbirth. This potentially has the effect of deterring women from seeking help because of mixed messages they are receiving. The significance of PND is minimized as a 'grab bag' term that everyone experiences, which is obviously incorrect (O'Hara, 1995).

1.1.2 PRESENTATION
Accurate diagnosis of any mental health issue is paramount. This is the first step towards determining treatment and, hopefully, alleviation of distressing and damaging symptoms (Acierno, Herson & Van Hasselt, 1996). It is most striking that the diagnosis of PND is commonly missed, attributed to a combination of factors including presentation (or lack of), confusion over definitions and uninformed beliefs (Nonacs & Cohen, 1998; Stuart, O'Hara & Blehar, 1998). Pope and Watts (1996) claim that women with PND can be thought of as a heterogeneous group because, within any sample, they may have received varied diagnoses of major depression, atypical depression, adjustment disorder, dysthymia or even personality disorder.

PND has been described as the 'smiling depression' (Dalton, 1971; Pritchard & Harris, 1996). This is in recognition of the fact that many women strive to maintain the appearance of coping and that "everything is fine" in compliance with their perception or expectation of what the mothering experience is 'supposed ' to be. Cox (1986) and Pope (1995) suggest that women also expect and fear criticism and ridicule, believing they will be branded a "bad mother" and worry their child will be removed by child welfare authorities should they openly disclose difficulties and seek help.

Women themselves, particularly primiparous women, find it difficult to determine if what they are experiencing is par for the course, or is unusual either in occurrence, frequency or severity, especially in the case of disturbing somatic symptoms. A prevailing social attitude that 'this is just what mothers go through' continues to exist. What is considered to be 'normal' adjustment and what is not, is not only confused by women and their families, but also by health care professionals (Cox, 1986; Hearn, Illiff, Kirby et al., 1998). This is complicated by the fact that often the onset of these symptoms is insidious and not abrupt and severe (Epperson, 1999).
Currently, diagnosis of PND is based on traditional diagnostic criteria for unipolar depression (Bhatia & Bhatia, 1999; Whiffen & Gotlib, 1993; Yonkers, 1998). Major symptoms include: depressed mood, loss of interest in usually pleasurable activities, changes in appetite*, sleep disturbance*, loss of energy*, agitation or retardation, feelings of worthlessness or inappropriate guilt, diminished concentration or indeciveness*, and frequent thoughts of suicide or death.

These symptoms are the DSM-IV criteria for depression (American Psychiatric Association, 1994). For a classification of major depression, a person needs to be experiencing either of the two main symptoms (depressed mood, loss of enjoyment) and any four of the other symptoms consistently for a period of at least 2 weeks (Najman, Anderson, Bor, O'Callaghan & Williams, 2000). For minor depression, presence of one of the main symptoms and at least two of the remaining symptoms present during the same two-week period is required. However, this becomes complicated with the postnatal population because several of the listed symptoms, indicated by asterix, are difficult to assess, as they overlap with normal phenomena of childbirth (Epperson, 1999).

Table: 1.1 Symptoms reported in research that specially pertain to women with PND

<table>
<thead>
<tr>
<th>Symptoms of PND</th>
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<tbody>
<tr>
<td>Tearfulness</td>
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<tr>
<td>Irritability</td>
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<tr>
<td>Feelings of extreme anger, often directed at partner</td>
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<tr>
<td>Feelings of inadequacy, failure &amp; difficulties in coping with usual tasks</td>
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<tr>
<td>Loss of self confidence and low self esteem</td>
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<tr>
<td>Excessive disappointment centered around the labour &amp; delivery, breastfeeding or other expectations surrounding motherhood</td>
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<td>Decreased libido &amp; desire for physical contact with partner</td>
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<td>Reduced interest in social activities and social withdrawal</td>
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<tr>
<td>Obsessive thoughts and compulsions</td>
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<tr>
<td>Experiencing anxiety or panicky feelings</td>
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<tr>
<td>Fear for the infant &amp; sometimes of the infant</td>
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<tr>
<td>Fear of being alone or going out with the infant</td>
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<tr>
<td>Fears of harming the infant</td>
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<tr>
<td>Thoughts about wanting to run away or escape</td>
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<tr>
<td>Fear of being rejected by partner</td>
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<td>Fear of harm or death of partner</td>
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</table>
Researchers and clinicians cite differences in the number, type and severity of depressive symptoms reported by postnatal women when compared with women with depression outside the postnatal period (Cooper, Campbell & Day, 1988; Hopkins, Campbell & Marcus, 1989; O'Hara, Zekoski, Phillips & Wright, 1990; Pope & Watts, 1996; Whiffen & Gotlib, 1993; Wisner, et al., 1999).

Additional symptoms more specific to women depressed postnatally, as commonly reported, are presented in Table 1.1 above (Barnett & Fowler, 1995; Buist, 1993; 1995; 1996a; Byrne & Raphael, 1997; Romito, Sauerel-Cubizolles & Lelong, 1999).

1.1.3 THE DIAGNOSTIC CLASSIFICATION DEBATE
There is considerable debate over whether PND is phenomenologically different from major depression occurring at any other time during the lifespan (Whiffen, 1991& 1992; Wisner et al., 1999).

The impetus for the debate is that lack of a separate DSM-IV or ICD-10 classification has several possible negative consequences (Purdy & Frank, 1993). Firstly, confusion regarding accurate diagnosis is likely to continue. Secondly, statistics regarding prevalence rates are likely to be inaccurate. Thirdly, assessment methods will be varied, rather than standardized and possibly treatment of choice may be not be offered and applied (Brockington & Cox-Roper, 1988; Clayton, 1998; Najman et al., 2000; NHMRC, 2000).

It seems a vicious cycle has been established. Part of the difficulty in obtaining clarity in the PND classification debate seems to have been the difficulties encountered in making sense of the research. Differences emerge in definitions, psychometric measures used, and in times at which they have measured depression. Problems exist in the use of varied sampling techniques and samples obtained (community versus psychiatric), and samples used have been relatively small and homogenous. Therefore, results are difficult to generalize to populations beyond these (Wisner et al., 1999).

A comprehensive review by the NHMRC (2000) concludes that PND may be more prevalent than non-postpartum major depression in matched women (Whiffen, 1992). Symptom differences do exist (Hopkins et al., 1989; Whiffen & Gotlib, 1993; Wisner et al.,
1999), but childbearing women may have a higher likelihood of developing depression than age-matched controls (O'Hara, Schelte, Varner & Lewis, 1991; O'Hara, 1995; Whiffen, 1992).

Regardless of the nosological debate, both clinicians and researchers consider depression that occurs after childbirth to be different from depression at other times in the lifespan (Whiffen & Gotlib, 1993). From a public health perspective, it essentially doesn't matter to the individual whether their suffering receives a separate classification or not, or whether it arose during pregnancy or post delivery. They will still need treatment (O'Hara & Zekoski, 1988).

This distinction has consequences for the study and treatment of PND, and for the current study. If PND is considered to have a distinct diagnosis, there is no reason to believe that the large body of research information collected on general depression is applicable to PND. If it is believed that biological factors specific to childbirth trigger PND, then there is no reason to believe that standard psychological or pharmacological treatment will be effective (Whiffen, 1992; Whiffen & Gotlib, 1993). From one perspective this is exciting. It means that innovative modes and methods of treatment are possible and as yet untried.

1.1.4 DETECTION

Despite PND being topical for the last two decades, health workers appear to continue to lack confidence and accuracy in making assessment of PND. Moreover, once the assessment is made, they are often unsure about treatment options to offer, or are placed in the dilemma of identification without treatment services being available (Cox, 1986; Richards, 1998).

Since the 1900's in the Western world, routine postnatal care has included the six-week check-up (Holden, 1994). This was originally designed to reduce maternal morbidity rates. This check-up is usually conducted by the general practitioner (GP) or obstetrician. The purpose of this contact is one of progress monitoring and has a health promotion focus. At this time motivation of both patient and clinician is likely to be high, making this an optimal time for assessment and detection of PND (Kumar, Marks & Jackson, 1995).
Regardless of this, on mass, health care professionals (particularly GP's) could be doing a more comprehensive job of assessment and detection (Boardman, 1987; Gunn, Lumley & Young, 1998; Hearn et al., 1998; Small, Johnston & Orr, 1997). One reason proffered for this poor detection rate is the divergence of expectations (of happiness and excitement), held by both patients and professionals, and the reality (a time of enormous demands and increased stress) of the post partum period (Nonacs & Cohen, 1998). This is concerning, especially given the assertion that the population who present to health care workers are not the total population, but more likely to be a healthier population than those who choose not to (Hearn et al., 1998). One could therefore surmise that a portion of the community, potentially, those in most need, are not receiving any treatment at all (Hearn et al., 1998).

Hence, inadequate statistics are collected in health systems regarding PND, having major political and funding allocation implications. For the consumer, this translates to lack of or inadequate treatment services/options (Pope & Watts, 1996).

1.1.5 PREVALENCE
For several years there has been ongoing debate over whether women are more likely to develop psychological illness in the postpartum period than at other times in the lifespan (Cox, 1994). The exact prevalence rates of PND vary according to diagnostic criteria (Pritchard & Harris, 1996). Prevalence rates ranged between 3% and 45% in early studies (Gotlib, Whiffen, Mount, Milne & Cordy, 1989; Tod, 1964). O'Hara (1995) notes that it was not until the 1980's when researchers began using standardized diagnostic criteria that reported prevalence rates of PND decreased.

Currently, it is generally accepted that PND affects between 10-20% of all childbearing women with onset most likely to be during the 6-12 weeks after delivery (O'Hara, Neunaber & Zekoski, 1984; O'Hara, Schelte, Varner & Lewis, 1991; O'Hara, 1995; O'Hara & Swain, 1996). The largest and most carefully controlled studies report rates of depression of 12% to 16% (O'Hara et al., 1984; O'Hara, Zekoski, Phillips & Wright, 1990; O'Hara & Swain, 1996).
Studies conducted in Australia reveal very similar prevalence rates to the worldwide literature, ranging between 9 and 15.4% (Astbury, Brown, Lumley & Small, 1994; Dennerstein, Lehert & Riphagen, 1989; Stamp & Crowther, 1994).

Interestingly, there is some evidence to suggest that rates of PND are substantially higher in rural areas of Australia. Griepsma, Marcollo, Casey, Cherry, Vary & Walton (1994) conducted a study of 185 women from rural Victoria in their first postpartum year and obtained a prevalence rate of 57.8%, from a response rate of 66%. It may be possible that more depressed than non-depressed women responded to the study, although generally, more depressed people are more likely to be non-responders. Additionally, the region had high unemployment rates; community services were scaled down and overburdened due to economic cutbacks. Access to services was difficult for a number of women, having to travel long distance to obtain support or treatment. Interestingly, a gap was identified in education for fathers/partners with regard to issues such as parenting practices, early recognition and support of PND. It may be that people in rural communities are more likely to hold traditional sex role stereotypes. Thus, women are not obtaining as much practical support from their partners as women with more egalitarian relationships would.

1.1.6 COURSE
Research findings on the duration of PND vary from several weeks to years, obviously dependent on a number of factors. These are severity of symptoms; individual causative factors, treatment obtained and compliance with treatment and, lastly, length of time passed for follow-up measures (Cox, Holden & Sagovsky, 1987; Taylor et al., 1994). Many researchers report that untreated PND is stable, and can continue beyond the first postpartum year (Gotlib, Whiffen, Mount, Milne & Cordy, 1989; O'Hara, 1995 & 1997; Whiffen, 1992).

Prominent researchers suggest that there may be important differences in PND that occurs early in the postpartum period rather than later. They propose different clusters of association and aetiological factors with depression that occurs in the first month versus that onsetting later in the postpartum period (Gotlib et al., 1989; Kumar et al., 1995).
Kumar et al. (1995) believe that there may be more obvious links between psychological and interpersonal factors as well as hormonal changes in this period. It is possible that depression that occurs earlier may be more likely to disrupt mother-infant attachment and, therefore, have more adverse effects on infant cognitive and social development. These hypotheses have not yet been tested.

For 60% of women, this will represent their first episode of depression (Stowe, Landry & Porter, 1995). But for a portion, it won't be their last. In terms of relapse rates or risk of subsequent postpartum episodes, figures vary from 30% to 62% depending again on methodological differences (Cooper & Murray, 1995; Wisner, Piendl & Hanusa, 1993; Wisner & Perel, 1996).

Risk of relapse has been found to vary by subtype. Women with a previous history of depression have a 30% risk of relapse (Kendell, Chalmers & Platz, 1987). Women with a history of bipolar disorder or those who have experienced PND before, have a 50% chance of relapse (Bagedahl-Strindlund & Ruppert, 1998; Davidson & Robertson, 1995; O'Hara, Schelte, Varner & Lewis, 1991).

1.2 AETIOLOGY OF PND
Definite mechanisms underlying any unipolar mood disorders found in women, are yet to be completely unraveled and conclusively agreed upon (Yonkers, 1998). The picture for PND is no different. Whiffen (1992) purports that it is complicated to determine the aetiology of PND because difficulties arise because of the need to distinguish antecedents of depression from its coexisting variables and consequences (Barnett & Gotlib, 1988a). Depressed people demonstrate generalized difficulties in interpersonal functioning (Gotlib, Whiffen & Wallace, 1991) and in information processing about the self, others and the future. So a negative skew or perception colours both their processing and recall (Beck, Rush, Shaw & Emery, 1979). Hence, prospective, longitudinally designed studies of PND are needed to tease out antecedents, reinforcers and consequences. A brief summation of the aetiological theories proposed for PND follows.
1.2.1 ANTHROPOLOGICAL THEORIES
The social structural change theory was based on early assertions that PND is a disorder restricted to Western Societies (Cox, 1988; Kumar, 1994). It was suggested that it is the absence of behavioural constraints, such as rites, customs and roles in the West, that were important in the causation of PND (MacIntrye, 1992; Stern & Kruckman, 1983). The evidence for this theory has been heavily criticized (Cox, 1988; Kumar, 1994; MacIntrye, 1992). In direct contradiction to the theory, incidence rates have proven to be fairly similar over time, in both Western and Non Western cultures (Kumar, 1994). In fact, estimates of the rates of PND are surprisingly homogenous for countries as culturally heterogeneous as Germany (Hertz, Umek, Coruba et al., 1997) and Japan (Sugawara, Sakamoto, Kitamura et al., 1999). Thus, PND transcends place, and, given the current evidence, cannot be explained by loss of traditional customs, rites and practices.

1.2.2 BIOLOGICAL MODELS
The biological theories are a broad set of approaches made up of hormonal, genetic and biochemical aetiological theories. The attention focused on biology arose primarily from the enormous physiological and endocrinological changes that occur in women during pregnancy and post-delivery (O'Hara, 1995; Steiner, 1998). For example, it has been suggested that PND occurs because of hormonal fluctuations that occur when breastfeeding ceases (Susman & Katz, 1988). Secondly, the clustering of mood disorders that occur soon after delivery, suggests some link with the birth events (Wisner & Stowe, 1997). Lastly, the worldwide comparable rates of postnatal mood disorders imply a phenomenon that transcends culture.

Over the last 20 years many hypotheses asserting a biological basis for PND have been researched, with little evidence to support this viewpoint (Granger & Underwood, 2001; Harris, John & Fung, 1989; Joffe & Cohen, 1998; Lee, 1997; Maes & Melzer, 1995; Moore, 1992; Nomura, 1994; O'Hara, 1991a; 1995; Smith, Cubis, Binsmead et al., 1990; Wisner & Stowe, 1997). This research has resulted in improved understanding of the effect of various pharmacological treatments on PND, leading to the advancement and refinement of various types of antidepressant medication that are currently available and in use. Although it is acknowledged that treatment of PND with medication alone is insufficient, it is an important
aspect of treatment for a substantial proportion of women with PND (Lee, 1997; Pope, 1995; Wisner & Stowe, 1997).

1.2.3 FEMINIST MODEL
This perspective argues that the symptoms that are indicative of PND are in fact normal responses to a traumatic and major life-changing event (Oakley, 1979; 1986; Sherr, 1995). Approaches that infer that PND is indicative of individual pathology, rather than a condition that has social and environmental causes are criticized (Kazan & Shorne, 1994; Nicolson, 1998). The model suggests that PND is caused, in part, by the various unrealistic assumptions or myths our society carries about motherhood (Nicolson, 1998; Sherr, 1995). Women attribute the difficulties they are experiencing in grappling with the accompanying stresses of parenthood to their own shortcomings, blaming themselves, rather than attributing the difficulties to the unrealistic expectations imposed on them by the role, leading to PND (Nicolson, 1998; Sherr, 1995). The feminist approach to tackling the problem is broad and far-reaching, and would require some radical shifts in the structure of our society (Jebbali, 1993). It clearly echoes and extends the psychosocial model, but has limitations due mainly to a lack of an empirical evidence base.

1.2.4 PSYCHOLOGICAL PERSPECTIVES
Various psychological theories have been presented, including the psychoanalytic and psychosocial models, such as cognitive and behavioural theories, the learned helplessness theory, the social interactional and the stress diathesis theory. These are briefly described because of their application to treatment interventions for PND.

1.2.4.1 Psychoanalytic model
Psychoanalytic formulations of depression suggest an underlying character or personality structure is responsible for depression. This means that the target for treatment is altering the character structure of the individual (Bemporad, 1985; Blum, 1978; Karacan & Williams, 1970). This is addressed by exploring and clarifying problems or conflicts with interpersonal relationships the client is experiencing rather than targeting the depression itself (Scott, 1995).
1.2.4.2 Psychosocial theories
In contrast to the psychoanalytic model and more compatible with the feminist model, the psychosocial models attribute the cause of PND to the physical and social environment, rather than looking to establish the cause within the individual (Cox, 1986; Chadwick, 1995; Morse, 1993; Raphael-Leeff, 1991). Environmental and social stresses such as poor housing, loneliness, unemployment and marital disharmony are all considered to have an adverse impact of mental health. Evidence that PND arises from, or is at least maintained by, psychosocial factors is the persistence over time of PND long after physiological changes have resolved themselves (Cox, Murray & Chapman, 1993; Phillips & O'Hara, 1991). Prevention of PND is seen as coming from the social inequalities being addressed through political lobbying and empowerment of women who are taking on the mothering role, as well as practical strategies to decrease stress levels and raise mood (Albright, 1993; Buist, 1996a; Harris, 1994; Lee, 1997; Moore, 1992; Thurtle, 1995).

1.2.4.3 Cognitive and Behavioural models
Throughout the developed world, psychological research and clinical practice has been heavily influenced by the cognitive and behavioural models (CBT) of depression (Bandura, 1977; Beck, 1970; Lewinsohn, Youngren & Grosscup 1979). The various CBT models have received the most attention in terms of empirical research testing their applicability to predict PND. Overall, the research has indicated support for cognitive and behavioural explanations (O'Hara, Rehm & Campbell, 1982; O'Hara et al., 1984; O'Hara, Schelte, Lewis & Varner, 1991a). Importantly, to this study, are the various treatment applications that have arisen out of the CBT models, which inform the treatment package trialled here.

1.2.4.4 Behavioural model
The behavioural model holds that a reduced level of response contingent positive reinforcement leads to symptoms of depression (Lewinsohn et al., 1979). For example a woman staying at home to look after her baby, has less contact with her friends or colleagues from work, therefore experiencing a loss in usual social reinforcement, triggering depression. Depression will be ameliorated when the rate of reinforcement for adaptive behaviour is increased (Lewinsohn, et al., 1979).
Examples of treatment approaches that have originated from a behavioural formulation of depression are the reengagement of the depressed person in constructive and rewarding activities, and training in social skills to enhance the woman's capacity to receive reinforcements from social interactions (Emmelkamp, 1994).

1.2.4.5 Cognitive model
The cognitive model holds that beliefs reflecting a negative view of the self, the world and the future lead directly to symptoms of depression, such as low self-esteem, pessimism and problematic interpersonal relationships (Beck, 1970). These beliefs, known as the 'negative cognitive triad', are presumed to be caused by faulty information processing due to particular schemas or assumptions that were established during childhood. A woman with PND sees herself as deficient, inadequate and worthless. She will, according to this model, tend to distort the way she sees the world (Beck, Shaw, Rush & Emery, 1979; Boyce, 1994; Cox, 1986).

In cognitive therapy clients are systematically taught to evaluate their beliefs and information-processing capacities with the aim of reducing depressive thinking styles (Kovacs & Beck, 1978). This approach relies heavily on teaching clients to treat their beliefs as hypotheses, and to gather information and conduct behavioural experiments to test them. Clients are encouraged to actively challenge and dispute preexisting beliefs and thinking styles (Beck et al., 1979).

1.2.4.6 Learned helplessness model
The Learned Helplessness model (Abramson, Seligman & Teasdale, 1978) looks at the way depressed people explain events. This model proposes that when faced with uncontrollable events, people make attributions about the cause of the uncontrollability. The model specifies three relevant attributional dimensions, (internal-external, stable-unstable and global-specific), that lead to the expectation of future non-contingency and consequently symptoms of helplessness or depression (Abramson et al., 1978).

According to the model, a woman with PND will interpret negative events, such as the baby not sleeping, as arising because of her failure as a mother (internal attribution), rather than because the baby is teething. She may go on to believe she is a failure in all things (global attribution) and will never succeed (stable attribution) (Boyce, 1994). Findings regarding
negative attributional style are mixed. Some large studies have found negative attributional style to significantly predict PND (Cutrona, 1983; O'Hara et al., 1982). Others have failed to replicate these results (Cox, 1986; Gotlib et al., 1991; O'Hara et al., 1984, O'Hara, 1995; Whiffen, 1988). One of the problems with the theory is whether learned helplessness is a cause of depression or a consequence of it.

In terms of applications for treatment, the Learned Helplessness model teaches clients to change their explanatory style to create more optimism (Seligman, 1999). The development of strategies to increase self-esteem is also a contribution from this approach (Seligman, 1999).

1.2.4.7 Self control model
This model holds that a disturbance in self-regulation leads to symptoms of depression (Rehm, 1977). It provides a framework for integrating cognitive and behavioural models. Self-control therapy seeks to remedy deficits in self-regulatory skills (Rehm, 1977). Skills taught include self-monitoring of daily activities, setting realistic goals, and planning self-reinforcement or self-administering rewards (O'Hara, Rehm & Campbell, 1982; O'Hara et al., 1984; Rehm, 1977).

1.2.4.8 Social interactional model
Kraus and Redman (1986) posit that PND can evolve through interpersonal interactions and it is best dealt with in an interpersonal context. They suggest that the role of family interactions in PND have been overlooked because diagnostic labels tend to focus our thinking on traits of a person in isolation, rather than ongoing relational processes. The interactional view emphasizes recurrent patterns of problem maintaining behaviours, rather than simple linear causality. The origins of the interactional view appear to lie with both a developmental perspective and a social constructivist perspective, in keeping with the other psychosocial models.

Social interaction theory suggests therapy needs to be focused on social skills training, cognitive self-control and decision making (Scott, 1995). Significant others are encouraged to be actively involved in this approach, particularly with the social skills training (Kraus &
Redman, 1986). In the case of PND, this would extend to the woman's partner, and provide a rationale for inclusion in intervention.

More recently, Interpersonal therapy (IPT) has also been developed out of this approach, and has been trialled for PND (Stuart & O'Hara, 1995). This approach aims to reduce symptoms of depression and resolve associated role impairment, again through a variety of techniques including social skills training, psychoeducation and relapse prevention (Scott, 1995).

1.2.4.9 Stress-diathesis model
The stress-diathesis or stress-vulnerability model is by far the most general and ubiquitous interactive model. This model suggests a psychological disorder is the result of a disorder specific predisposition towards a disease (the diathesis), which is expressed under conditions of general or specific environmental stress (Brown & Harris, 1978; O'Hara, Schelte, Lewis & Wright, 1991; Linehan, 1993). Childbirth and accommodation of a new child into the family unit is seen as an additional, demanding and stressful life experience. In combination with an already taxed system, this may lead to the development of PND. Support for this model is found in the pioneering work of O'Hara, Schelte, Lewis & Wright (1991) and O'Hara (1995).

SUMMARY:
In summary, a host of possible aetiological theories for the development of PND have been advanced. None of these theories is able to provide the complete answer, however, they all make useful contributions to our collective understanding and inform treatment practices. Of these theories, the stress-diathesis model, combining biological, social and psychological factors, best describes the range of variables that contribute to PND.

1.3 RISK FACTORS FOR THE DEVELOPMENT OF PND
Risk factors are characteristics, variables or hazards that if present in a person's life make it more likely that they will develop a disorder (Kowalenko et al., 2000). Since the 1980's a concentrated research effort has gone into determining antenatal, perinatal and postnatal risk factors for PND. From a theoretical perspective, the risk factor research has been
developed predominantly from the psychosocial model. What seems to be illustrated from these findings is that a complex causal pattern or chain is involved in the aetiology of PND.

There are, however, still some important questions to be answered. Few studies have tried to take into account all possible factors involved in a mother's psychological well being, perhaps because this is a bottomless task. Methodological differences can explain some of the inconsistencies in findings, but possibly the role of contextual factors and interrelationships between variables contain the entire picture (O'Hara, 1995; Wisner, Peindl, Gigliotti & Hanusa, 1999). Some researchers suggest that there may be different risk factors associated with early onset versus late onset PND (Gotlib et al., 1989). For example it is speculated that early onset PND is more likely to be associated with biological factors than late onset (Taylor et al., 1994).

Table 1.2: Potential risk factors for mood disorders in the perinatal period

<table>
<thead>
<tr>
<th>During pregnancy</th>
<th>At delivery</th>
<th>After the birth</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Maternal age &lt;18 or &gt; 35 yrs</td>
<td>• No partner</td>
<td>• No partner / support person</td>
</tr>
<tr>
<td>• Previous termination, miscarriage, stillbirth, neonatal death/SIDS</td>
<td>• No support person at the birth</td>
<td>• Multiple birth</td>
</tr>
<tr>
<td>• Pregnancy not wanted</td>
<td>• Birth complications, especially if perceived as life threatening</td>
<td>• Sick baby / mother</td>
</tr>
<tr>
<td>• Pregnancy complications, e.g. Hypertension, admissions to hospital prior to delivery</td>
<td>• Labour and delivery complications</td>
<td>• Abnormal appearance of baby</td>
</tr>
<tr>
<td>• Severe premenstrual mood problems</td>
<td>• Negative feelings about baby</td>
<td>• Not the expected baby e.g. gender</td>
</tr>
<tr>
<td>• Low SES / financial strain</td>
<td>• Markedly premature / postmature delivery</td>
<td>• Temperamentally difficult baby</td>
</tr>
<tr>
<td>• Lack of social support</td>
<td>• Expectations of the birth not met</td>
<td>• Breastfeeding problems</td>
</tr>
<tr>
<td>• Lack of partner support / conflict within relationship</td>
<td>• Hospital vs. home birth</td>
<td>• Perfectionistic personality traits</td>
</tr>
<tr>
<td>• Drug / alcohol problems</td>
<td></td>
<td>• 'Baby blues'</td>
</tr>
<tr>
<td>• Recent bereavement / loss</td>
<td></td>
<td>• Early hospital discharge</td>
</tr>
<tr>
<td>• Personal / family history of psychological problems, childhood history of abuse</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Poor relationship with own mother</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Low self esteem</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Perfectionistic personality traits</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


Four risk factors consistently appear in meta analyses of previous studies. These are: previous psychiatric history, marital or relationship conflict or dissatisfaction, low social support and stressful life events in the time leading up to the birth of the infant (Beck 1996a; 1996c; Boyce, Hickie & Parker, 1991; Cutrona, 1983; Gotlib et al., 1991; Kumar & Robson, 1984; O'Hara et al., 1984; O'Hara, Schelté, Lewis & Wright, 1991; O'Hara & Swain, 1996; Murray, Cox, Chapman & Jones, 1995; Watson, Elliot, Rugg & Brough, 1985).

Table 1.2 above provides a full list of potential risk factors that have been developed for postnatal mood disorders. These risk factors have been collated from studies cited above.

1.4 PROTECTIVE FACTORS AGAINST DEVELOPMENT OF PND

Protective factors are individual and family strengths that protect a woman and her family from the development of a disorder (Kowalenko et al., 2000). Minimal research has been conducted to date in this area. Potential protective factors for perinatal mood disorders that have been identified in the literature are an available supportive interpersonal relationship, especially with partner and with own mother. Having adequate self esteem and good physical and mental health are buffers. Other factors that are important are access to services, strong community networks, financial stability, and an easy to manage infant (Kowalenko et al., 2000).

1.5 EFFECTS OF PND

One of the reasons PND has received so much research attention is the effect it has on all members of the family unit. PND impacts on the mother and her ability to function effectively, on the relationship between the mother and her infant and other children, on the
relationship between the woman and her partner and on her partner himself. In order to understand these interactions, and to determine how much PND effects relationships, an understanding of the complex processes involved in the normal transition to parenthood is needed.

1.5.1 THE TRANSITION TO PARENTHOOD FOR WOMEN
Motivations to have a child are highly personal and complicated. Motivations commonly documented are genetic immortality, achieving true 'adulthood' by becoming parents, the desire to emulate our parents, the desire to reciprocate parental care received, the desire to 'make good' experiences of poor parenting, to create a love object that will love in return, and to transmit individual culture, experiences, knowledge and skills (Blum, 1980; Buist, 1996a; Raphael-Leff, 1991). Further possible reasons that are not cited in the literature may be: to attempt to salvage a failing relationship, to attempt to secure commitment from a partner, to comply with peer group expectations, to obtain a socially legitimate way out of a stagnant or stressful career, or to create a more positive role for oneself within society.

The reality of pregnancy can challenge some of the above motivations for becoming pregnant. Raphael-Lee (1991) argues that all pregnancy involves loss, and many women have mixed feelings once they find they are pregnant. Pregnancy and parenthood can involve postponement of career or education, diversion of emotional resources or threat of financial drain and the risk of having an abnormal baby, or losing the baby.

During pregnancy the woman becomes increasingly focused on her body. Although her partner can also feel the foetus move, it is the woman who is primarily aware of it. This increasing self-focus often will continue into the post partum months, with many women describing "falling out of love with my husband and in love with my baby" (Buist, 1996a; p. 40). Often it is a time when body image is poor due to weight gain, women fatigue easily, they may suffer with nausea and report becoming increasingly anxious about the health of their unborn child (Buist, 1996a).

For a number of women the birth process is traumatic and they are physically stressed. In the postpartum period they find themselves exhausted, overwhelmed with no time for themselves or their partners (Rapael-Leff, 1991). Moreover, the arrival of the baby heralds
many, often permanent, changes in roles, family dynamics, needs and family structure. The baby demands a lot of physical and emotional time that the woman once spent with her partner or in other social relationships (Sherr, 1995)

1.5.2 THE TRANSITION TO PARENTHOOD FOR MEN
Reports of the death of the family have been widely exaggerated (Popenoe, 1993). The great majority of dependent children still live with a mother and a father, and 95% of Australian new mothers indicate that they have a male partner (Australian Bureau of Statistics, 1995). It seems, for now, we can safely assume that the nuclear family will continue to be the preferred option for raising children.

Parenting is not a role that applies to women alone. The state of her relationship will have an enormous effect on the transition to parenthood. This is, in part, determined by the transition her partner makes (Buist, 1998; Levy-Skiff, 1994). Importantly, initial success in coping with the transition to parenthood, has been found to have a major impact on later relationship quality (Tomlinson & Irvin, 1993).

The expected role of the father or male partner in the childbirth and child rearing process has dramatically changed over the past 50 years (Perry-Jenkins, 1993). It has only been since 1955 that fathers were allowed into the labour and delivery rooms. Prior to that parturition was seen as a female or health professional only domain (Brockington, 1995). Fathers were seen as the 'cigar smoking husband' who was relegated to the waiting room. This has given way to expectations of paternal involvement in prenatal education, childbirth, bonding and child care participation.

Some fathers are taking up this challenge. Some fathers are single parents. Others reduce their work commitments to spend time with the family. Many recognize the need to increase the status of the paternal role, which, at times, is in direct competition with other male roles (Barnett & Baruch, 1987; Brockington, 1995; Sherr, 1995).

The transition to fatherhood is accompanied by a period of adaptation, needed to assimilate the change in lifestyle and roles (Buist, 1996a). The female partners' pregnancy may be reassuring in terms of proof of virility, and fantasies of the child may reinforce one's own
self image. However, not uncommonly, fears about commitment to their partner, a reduction in their freedom, an increase in their responsibilities and a lack of attention (whilst their partner is receiving a lot of attention) are all factors that men may need to contend with. On top of this, for some, the birth process may be highly traumatic and may trigger past childhood issues (Buist, 1996a, Raphael-Leff, 1991).

1.5.3 THE LINK BETWEEN PND AND RELATIONSHIP QUALITY

Quality and perception of quality of intimate relationships both antenatally and postnatally have consistently been found to be strong predictor factors of not only the aetiology of PND, but also its maintenance (Boyce et al., 1991; Kumar & Robson, 1984; Merchant et al., 1995; O'Hara, Schelte, Lewis & Varner, 1991; O'Hara, Schelte, Lewis & Wright, 1991; Paykel et al., 1980; Watson et al., 1984;).

Symptoms of PND such as fatigue, loss of interest and withdrawing from social contact may also contribute to increased marital dissatisfaction. O'Hara et al. (1990) suggested that this may be because the necessary relationship adjustment following childbirth was too difficult for depressed women to cope with. For example, one of the commonly documented features of PND is extreme irritability, particularly directed at the woman's partner (Holden, 1991). This may be interpreted by him as a sign of rejection rather than as a cry for help, further compounding difficulties and eroding good will within the relationship. It makes sense that if the relationship into which the child is born is conflictual or strained, then there is a stronger likelihood that the mother will suffer depression (Kazan & Shorne, 1994).

It may be that a woman who becomes depressed has difficulty choosing a partner who is capable of providing sufficient emotional and instrumental care for her. Alternatively, she may behave in a way to elicit uncaring responses or being in a relationship with an uncaring partner, perceive herself as sensitive or fragile resulting in low self-esteem and depression. Or, once depressed postnatally, she may be incapable of evoking additional care and support needed from her partner.

Merchant et al. (1995) assessed the impact of levels of marital adjustment and childcare stress on a sample of 71 middleclass, first-time, American mothers with PND. The women were assessed over 12 months postpartum. The importance of marital adjustment on PND
was evident at 9 and 12 months. The impact of childcare stress was supported only as an interactive effect with marital adjustment. Women's perception of partners' level of support (emotional and instrumental) and the amount of synchrony they have in household management and childrearing significantly impacted on marital satisfaction and maternal well-being.

The study was based on Levitt's (1991) theoretical model of changes that occur in relationships in the transition to parenthood. The model proposes that satisfaction in close relationships depends not only on the support exchanged within relationships, but also on the extent to which that support fulfills the individual's expectations (Levitt, 1991). Violations of expectations are associated with negative change in relationships. Exceeding expectations is associated with positive change. Relationship satisfaction is said to serve as a mediating variable in contributing to the individual's well being, including emotional affect and parenting attitudes. Relationships are particularly vulnerable to change following major life transitions, such as childbirth where support needs intensify and expectations are likely to be tested. Subsequently, well-designed longitudinal studies (Coffman, Levitt, Deets & Quigley, 1991; Coffman, Levitt & Guacci, 1993; Coffman, Levitt & Brown, 1994) have provided support for this model.

In summary, both women's and men's emotional health is obviously affected either directly or indirectly by their partner, impacting on their functioning in an array of areas, including their emotional affective state and their ability to parent optimally. This is echoed by Holmes and Boon (1990) in a thorough review of the literature on close relationships. They concluded that the quality of people's close relationships has profound effects on their physical and emotional well being, overshadowing other aspects of their lives.

1.5.4 DEPRESSION IN MALE PARTNERS OF WOMEN WITH PND (COUPLE COMORBIDITY)

There are several reasons for suspecting the spouses/ partners of women with PND may be at increased risk for psychological illness themselves. Firstly, the findings of increased marital difficulties in women with PND mean spouses are more likely than usual to be participants in difficult marriages (Boyce et al., 1991; Kumar & Robson, 1984; Merchant et al. 1995; O'Hara, Schelte, Lewis & Varner, 1991; Paykel et al., 1980; Watson et al., 1984).
Secondly, people living with those with psychiatric illness often have psychiatric illness themselves (Kuipers, 1992). Lastly, the spouse is stressed because of their partner's difficulties, but also has increased stress in attempting to cope with the demands of a new baby, possibly other children, and employment commitments. These factors are viewed in light of the findings that for many men, their spouse is their main source of social support (Harvey & McGrath, 1988).

The following studies capture the essence of the motivation for the current research. The need to address PND as an issue affecting both parents and to include both parents in subsequent treatment is highlighted. Given the research findings presented below, it is likely to be beneficial to try to prevent depression in at-risk men, in turn, increasing the amount of support they can give their wives and children (Areias, Kumar, Barros & Figueiredo, 1996a). Which may facilitate efforts to prevent adverse impact on offspring.

Harvey and McGrath (1988) conducted the first study on couple morbidity in postnatal illness with their study of 40 men whose spouses had been admitted to inpatient facilities and 25 new fathers. Forty two percent of fathers, whose partners were inpatients, received a diagnosis of either depression or anxiety compared with 4% of the comparison group. Harvey and McGrath (1988) suggest that the most likely causal factor for the men’s depression and anxiety was the wife’s illness. The researchers acknowledged the comparison group was possibly biased towards lowest morbidity, and that this group of women were severely ill, either suffering from severe depression or postpartum psychosis. However, even given these limitations, this is a very concerning depression rate.

Lovestone and Kumar (1993) replicated Harvey and McGrath’s (1988) study with some important alterations. They studied 24 spouses of women with PND and 23 spouses of well women over 9 months postnatally using the SADS (Endicott & Spitzer, 1978). Thirty three percent of men whose wives were depressed were depressed also. Retrospective reporting revealed 38% of these men had a prior episode of psychiatric illness. Lovestone and Kumar (1993) concluded that people vulnerable to psychiatric disorder do intermarry more often than by chance, and that induction of an illness in a well partner does occur when one’s partner is unwell, in vulnerable individuals.
Raskin, Richman and Gaines (1990) assessed depressive symptoms in 86 new parents. Close to 60% of couples had at least one member suffering depression at 8 weeks postpartum. Both spouses were symptomatic in 11.1% of affected couples during pregnancy, and 12.5% after childbirth. Almost 20% percent of the fathers were found to be depressed postnataally. The authors concluded that limiting research focus in the postnatal period to women only, underestimates the psychological impact on both parents in the transition to parenthood.

Ballard, Davis, Cullen, Mohan and Dean (1994) conducted the most comprehensive study of incidence of depression of mothers and fathers during pregnancy and postnatally. The researchers began with a sample of 200 couples of newborns that were assessed at 6 weeks and 6 months postpartum for depression. A control sample of 87 couples with children aged 3-5 years were assessed. Although a significant difference between postnatal couples and couples with older children was not obtained, depression rates were higher in postnatal couples. At 6 weeks, 27.5% of mothers and 9.0% of fathers were rated as depressed. At 6 months, 25.7 % of mothers and 5.4% of fathers were depressed. Fathers were significantly more likely to be depressed if their partners were.

In a study that compliments Ballard et al. (1994) and extends it by following couples for a 12-month period, Areias et al. (1996a) studied 54 first time Portuguese mothers and 42 of their partners. Subjects completed the EPDS (Cox et al., 1987) and the SADS (Spitzer, et al., 1978). Although the study had small samples, and the drop out rate was higher for men, the results are interesting. At three months, 24.5 % of women and 4.8% of men were rated as depressed (new cases). This figure remained intact for the women, but increased to 23.8% for men at 12 months. Thus the men's depression came later on in the first postnatal year, seeming to follow the depression of their wives. Presence of depression was related to prior history for women, and having a partner with depression. For men, having a depressed wife during pregnancy or in the first 3 months postnataally was significantly related to their own depression.

Another larger, cross-cultural study was conducted in Ireland with 308 new mothers and 181 of their partners (Lane, Keville, Morris et al., 1997). Subjects were assessed using the EPDS (Cox et al., 1987) and the Highs Scale (Glover, Liddle, Taylor, et al., 1994). Mothers
scored within the commonly found range of depression prevalence rates, 11.4% at day 3 and 11% at 6 weeks. Only 3% of fathers rated as depressed at day 3 and 1.2% at 6 weeks. The authors suggest that the low rates of depression in men may be explained by the fact that it is not the life event itself, that is triggering the depression, but that PND is due to biological and hormonal factors, a view that has received resounding criticism. It needs to be noted firstly, that this group measured the rates of depression very early, possibly not allowing enough time for depression to develop, particularly for the men, as previous studies have shown (Areias et al., 1996a; Ballard et al., 1994). Secondly, 78% of mothers in this sample completed the study, and just over half the partners agreed to participate. It may well be that those who didn't were more likely to be suffering depression. Thirdly, the EPDS had not been validated on men and may not be sensitive enough to pick up their depressive symptomatology. It has been suggested that men exhibit their depression differently to women (Ballard et al., 1994; Brems, 1995; Wilhelm & Parker, 1994) and this may be particularly true for Irish men.

Soliday, McClusky-Fawcett & O'Brien (1999) studied 51 American well-educated, middleclass couples assessing coping, marital satisfaction, and depression (CES-D, Radloff, 1977) at one-month pre and post partum. Almost 40% of mothers and 25.5% of fathers were rated as depressed at one month postpartum, and in 20% of couples, both parents were rated as depressed. These figures are elevated, possibly due to two reasons. Firstly, at one month postpartum, there is likelihood that baby blues are being included, which affect the vast majority of mothers. Secondly the CES-D is not commonly used in PND measurement and may be elevating rates, due to the scale containing somatic symptoms that are not indicative of PND. Level of perceived parenting stress, perceived parenting competence and child characteristics predicted depression scores for both men and women. Father's parenting stress correlated significantly with marital satisfaction and depression, flagging for clinicians that when fathers appear to have elevated parenting stress, attention should be paid to marital functioning and his depression levels.

Two large, longitudinal studies have been recently completed on Australian samples. Matthey et al., (2000) assessed 157 first-time parents up to 12 months postnatally. A range of mood and personality measures, including both the Beck Depression Inventory (BDI, Beck, Ward, Mendelson, Mock & Erbaugh, 1961) and the EPDS (Cox et al., 1987) were
used. Although the take-up rate of this study was reasonably low, 59%, only 7% of couples were lost from the study. This sample was well educated in comparison with many samples previously studied, with over a third of women and over half the men having completed a university degree.

The incidence of depression for men was consistently lower than that for women. Between 7.7% and 12.4% of women and 2.8% and 5.3% of men were depressed across the four assessment periods. Rates of depression in this study were in the lower range of those described previously. A small but increasing association between maternal and paternal depression was found across the first postpartum year, attributed to cumulative effects of increased stress over the first postpartum year. Again, partner support proved to be an important predictor factor for depression in both sexes.

Morse, Buist and Durkin (2000) assessed 327 healthy couples recruited from community health services at four times from mid pregnancy to 4 months postpartum. At assessment point four, 251 couples remained (88%). Participants were assessed with a variety of mood, relationship, support and stress measures, including the EPDS (Cox et al., 1987), BDI (Beck et al., 1961), and DAS (Spanier, 1989). These researchers reported a cut-off score for the EPDS of 10. This is lower than that recommended for detection of depression. As a result, this data is reported in terms of postnatal 'distress'. During pregnancy, 19.5% of women and 12% of men were distressed. This increased for women to 21.1% at 36 weeks and 4 weeks postnatally, dropping to 13.9% at 4 months. For men, levels of distress decreased to 8.7% at 36 weeks and 5.8% at 4 months postnatally. This pattern of men experiencing distress early, and then resolving it, is different from previous findings, however this sample was only followed up for 4 months, perhaps not long enough to detect the increase in depression rates that have been found over time.

Never-the-less, these findings prompt Morse et al. (2000) to state that standard management of antenatal care in Australia was inadequate for a sizable proportion of parents. Typically, physical health is the prime focus, with emotional and psychological adjustment issues for both women and men largely ignored, often until psychological problems have developed. Morse et al. (2000) call for comprehensive antenatal
assessment and early psychosocial intervention for both partners, inevitably reducing long-term financial, psychological and emotional costs.

1.5.5 RISK FACTORS FOR DEPRESSION IN FATHERS

Table 1.3 illustrates the risk factors that have been obtained to date from the research presented above (Areias et al., 1996a,b; Ballard et al., 1994; Lovestone & Kumar, 1993; Matthey et al., 2000; Morse et al., 2000). These risk factors are obviously not an exhaustive list, and not nearly as comprehensive as information available for women, however they do provide a starting point for researchers and clinicians.

Table 1.3: Risk factors for men developing depression in the postnatal period.

<table>
<thead>
<tr>
<th>Risk factors</th>
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</thead>
<tbody>
<tr>
<td>✦ Having a partner with PND</td>
</tr>
<tr>
<td>✦ Personal history of psychiatric illness</td>
</tr>
<tr>
<td>✦ &lt; 31 yrs &amp; birth order 4th or later</td>
</tr>
<tr>
<td>✦ relationship with child's mother &lt; 2 yrs duration</td>
</tr>
<tr>
<td>✦ poor relationship with own father</td>
</tr>
<tr>
<td>✦ high levels of parenting stress</td>
</tr>
<tr>
<td>✦ relationship dissatisfaction</td>
</tr>
<tr>
<td>✦ being unemployed</td>
</tr>
<tr>
<td>✦ concerns about work performance</td>
</tr>
<tr>
<td>✦ personality traits of high neuroticism</td>
</tr>
</tbody>
</table>

To summarize, men whose partners suffer from PND are more likely to suffer from elevated depression rates themselves. Often this occurs some months later than their partner's depression. The causality of this elevated depression rate is not completely understood. Possible reasons include the evidence that people vulnerable to mental health problems are more likely to intermarry. A likely cause is the much replicated finding that women with PND are more likely to have increased levels of relationship dissatisfaction and conflict. Thus, it is not surprising that the other half of this relationship is also depressed, particularly given the evidence that many men rely on their intimate relationship for much of their social support. Another potential factor is the increased stress and responsibilities that accompany living with a depressed person, especially when the added responsibility of extremely dependent infants are involved. Perhaps, the added stress that occurs naturally, when any major life change requiring adjustment occurs, may constitute increased susceptibility to depression for some men, more than others. These are all plausible
aetiological factors, whether they operate in isolation or in an interactive fashion is yet to be determined.

1.5.6 MEN'S REPORTED EXPERIENCES

Barnett (1992) reports from clinical experiences of working with clients affected by PND that men welcome having their needs listened to and frequently cite:

- Loss of intimacy within their relationship
- Being depressed themselves, often in response to changes in their relationship
- Feeling more stressed due to economic and career responsibilities and opportunities
- Having a poor understanding of PND, believing it is related to hormonal changes
- Strongly adhering to the belief that all women manage, it is just their partner who is not
- Fearing the future, and questioning whether their partner will recover.
- Feeling excluded from their infant

These observations are reinforced and dramatically illustrated by men's self report of their experiences in a recent study. Meighan, Davis, Thomas and Droppleman (1999) conducted a phenomenological interview study of eight fathers whose spouses had suffered from PND. The experiences related by the men were consistent, with major themes of loss being expressed. The men revealed a major disruption in their lives and their relationships as a result of PND.

Following the delivery of the baby and the onset of their partner's depression, the men reported that their partners had significantly changed, being described as 'no longer being themselves'. The men reported experiencing fear, confusion and much concern for their spouses and felt unable to help them in overcoming PND (Meighan et al., 1999). The inability to 'fix the problem' created frustration, anger and a sense of helplessness. Most of the men reported making many sacrifices to hold the family and the relationship together. All the men reported stress from increased demands and fatigue. Many of the participants described feelings of anger and resentment, as one stated:

"I felt pushed to the edge...I was angry at the situation, angry at depression, angry at her for being depressed" (Meighan et al., 1999, p 205).

Fathers in this study described feeling alone and feeling they had no one to turn to because their partner was the person they usually relied on for support. The men in this study also highlighted a reluctance to reach out to others because of the stigma of PND. Even though PND improved over time the men reported being left to face an uncertain future with a
partner whom seemed to be very different from the one they had previously known, echoing observations of Barnett (1992) and Harvey and McGrath (1988).

In the light of these findings, the importance of professionals taking a lead in breaking down the stigma surrounding PND by providing improved antenatal education, being involved in assessment of PND and most importantly including fathers in the treatment of PND is stressed (Barnett, 1992; Buist, 1996b; Meighan et al., 1999).

1.5.7 TREATMENT OF MEN'S DEPRESSION OCCURRING IN THE POSTNATAL PERIOD

There have been no studies to date that include men in psychotherapeutic treatment in an attempt to target their own level of depression, as a result of their partner having PND. The literature documents a reluctance for men to engage in psychotherapeutic interventions. Men often present with atypical symptoms of depression and, when they do engage in psychotherapy, have been found to have a higher drop-out rate and non-attendance (Brems, 1995; Kornstein, 1997; Wilhelm & Parker, 1994).

1.5.8 THE IMPACT OF PND ON THE INFANT

The effect of PND on the infant and other children has been cited as one of the main reasons for paying more attention to this disorder (Brockington, 1995). There are three main reasons to look at the impact of postnatal mood disorders on children. Firstly, mothers are generally the parent who is the most continuous and constant caregiver in the early months of an infant's life. Secondly, it has been suggested that depressed mothers provide distorted environments for their infants (Murray, 1988; O'Hara, 1995). Thirdly, the scale of the potential problem calls for it to be addressed, with consistent estimates of up to 20% of all infants being affected (Cox, 1994; Gotlib et al., 1989; O'Hara et al., 1984; O'Hara, Schelte, Lewis & Varner, 1991a; O'Hara & Swain, 1996).

Another major reason is that we now know that developing PND increases a woman's risk for further depressive episodes later in life (Davidson & Robertson, 1995; Bagedahl-Strindlund & Ruppert, 1998; O'Hara, Schelte, Lewis & Varner, 1991) Potentially, these could occur during the critical development years of the children born to that woman.
1.5.9 IMPACT OF PND ON MOTHER INFANT INTERACTION

Current mood disorders are likely to contribute to the lowering of a mother's self esteem, confidence, concentration and, hence, the capacity to relate to her infant who is dependent on adult interaction. Lack of support from her partner will further impact on the capacity to consistently provide a secure environment (Brockington, 1995; Buist, 1996a). Two hypotheses have emerged regarding PND. Firstly, it may be that PND itself is sufficient to impair development of the mother infant relationship. Or, secondly, impairment occurs as a result of long-term problems in maternal communication, a by-product of PND (Murray, 1988). Parent-infant relationship impairment has been associated with a range of adverse long-term consequences, such as development of conduct disorder (Allen, Lewinsohn & Seeley, 1998; Greenberg, Speltz & DeKlyen, 1993).

On mass, it appears that the presence of PND does have an adverse impact on a mother's ability to interact optimally with her infant (Cohn, Matias & Tronick 1986; Field, 1984; Field, Sandberg & Garcia 1985; Field, Healy, Goldstein et al., 1988; Lyons-Ruth, Zoll, Connell & Grunebaum, 1986; Murray, 1992; Teti, Gelfand & Messinger, 1995; Rosenblum, Mazet & Benony, 1997). There is also a reciprocal effect that emerges where the infant's temperament impacts on the mother (Beck, 1996a; 1996b; Cutrona & Troutman, 1986; O'Hara et al., 1984; Murray, Stanley, Hooper et al., 1996; Sugawara, Kitamura, Toda & Shima, 1999; Whiffen, 1988). This results in a vicious cycle of poor relating. It has been asserted that the reported effects of PND on mother-infant interactions are largely due to artifacts as a result of studies relying on mother's self reports. There is some research support for this (Teti & Gelfand, 1991; Teti, Gelfand & Pompa, 1990). But also, these perceptions appear to be predictive of later outcome (Hart, Field & Ritfarb, 1999), highlighting another good reason for comprehensive early intervention in treating PND. Studies assessing the various risk factors for PND and how they contribute to this picture still need to be completed (Melhuish, Gambles & Kumar, 1988).

1.5.10 EFFECTS ON COGNITIVE FUNCTIONING

Hay (1997) has suggested that the early postpartum months may constitute a 'sensitive period' for cognitive development. Increasingly, studies are indicating less optimal cognitive development in the offspring of mothers with PND (Coghill, Caplan & Alexandra, Robson & Kumar, 1986; Hart, Field & Ritfarb, 1999; Hay & Kumar, 1995; Lyons-Ruth,
Connell & Grunebaum, 1990; Murray, 1992; Murray, Hipwell, Hooper et al., 1996a; Sharp, Hay, Pawlby et al., 1995). It is not known whether these delays are as a result of actual deficits in cognitive performance, or due to the high level of anxiety observed in these children when completing cognitive tasks (Jacobson, 1999). This cognitive deficit may not be evident in the long term (Murray, Hipwell, Hooper et al., 1996). Perhaps, as children grow, they are exposed to more than the primary caregivers, hence providing alternative routes of stimulation. The effect seems to be more pronounced for boys than girls, with no plausible explanation provided as yet (Murray, Fiori-Cowley, Hooper & Cooper, 1996). Importantly, for the current study, effective treatment of PND protects infants.

1.5.11 EFFECTS ON SOCIAL FUNCTIONING
There is some evidence of atypical social development in the children of mothers with PND (Jacobson, 1999). The picture that is emanating from the evidence to date, points to the development of a poor maternal child relationship that seems to develop early on and transcends time for a proportion of families, even once PND has resolved. (Murray, Sinclair, Cooper et al., 1999; Stein, Gath, Butcher, 1991; Uddenberg & Engelsson, 1978). Perhaps, once poor patterns of interrelating are set up, it is not easy to undo or turn around. Some research (Murray et al., 1999) has found poor marital functioning is related to this, which is not surprising, given the volume of research previously described on this area.

1.5.12 EFFECTS ON BEHAVIOURAL FUNCTIONING
Few studies have documented the long term effects of PND on behaviour of offspring. In brief, elevated child behavioural problems have been found through maternal self-report of mothers with PND (Ghodsian, Zajicek & Wolkind, 1984; Murray, 1992; Wrate, Rooney, Thomas & Cox, 1985). Teacher reports, thought to be more reliable, indicate increased behavioural problems for boys only (Alpem & Lyons-Ruth, 1993). In contrast, girls whose mothers suffered PND have been found to have more prosocial behaviours than others (Sinclair & Murray, 1998).

1.5.13 THE ASSOCIATION BETWEEN PND AND ADVERSE CHILD OUTCOMES
Quinton and Rutter (1985) proposed that the mechanism of association between PND and adverse child outcomes, could be either: genetic, the direct impact of the parental disorder,
indirect effects of the parental disorder or ill effects of the factors associated with the disorder, such as social adversity. It is difficult to tease out which, if any, of these pathways is the primary aetiology. Depression arising in the postnatal period could have an impact on infant and child development via each or any of these causal pathways (Campbell et al., 1995; Cutrona & Troutman, 1986; Lyons-Ruth et al., 1986; Murray, Fiori-Cowley, Hooper & Cooper, 1996; Murray & Cooper, 1997b; Stein et al., 1991). No one pathway or combination of pathways has been conclusively established, and further research is required. What is clear is that PND impacts adversely on infant development. There is now compelling evidence that maternal depression in the first few months of life adversely affects the cognitive and social development of the infant (Cogill et al., 1986; Caplan, Coghill & Alexandra, 1989; Murray, 1992). These findings suggest that perhaps a window period exists in human development when infants may be especially vulnerable.

Early onset depression may have a greater impact than later onset, perhaps because it is more likely to be associated with disrupted attachment, or other intrapsychic factors, rather than life stress in general. The longer the period of depression, however, the longer the period exists for continued disruption to the parent-infant relationship, allowing consolidation of dysfunctional patterns of interaction (Brockington, 1995; Kumar et al., 1995).

The infant's dependency on their caregivers, their sensitivity to human contact and the reality that most often the mother is the main environmental controller in the early postnatal months fuels the inquiry over the impact of PND and accentuates the need for effective treatment of PND.

1.5.14 FATHER-INFANT INTERACTIONS

Largely, the importance of the contribution fathers make to infant mental health has been neglected (Barrows, 1999). Many studies have focused on the effects of maternal depression on mother-infant interaction. Latterly, some research had been focused on the effects of paternal depression on older children (Phares, 1996). Very few studies have been published on the effects of depressed fathers on interactions with infants (Field, Hossain & Malphurs, 1999).
This is an important area of investigation, for two reasons. Firstly, fathers, although still usually the secondary caregiver, are becoming increasingly involved with their infants. Secondly, if their partner is suffering with depression, they will be more likely to have increased involvement. Non-depressed fathers have been reported to compensate for their depressed partner's behaviour or to buffer the negative effects of depressed mothers on infants (Hossain, Field, Pickens et al., 1994). This picture could become increasingly complicated if the father, too, is suffering with depression.

SUMMARY:
Depression has a substantial impact on interpersonal communication and functioning (Murray, Fiori-Cowley, Hooper & Cooper, 1996; Teasdale, Fogarty & Williams, 1980). Studies of healthy mother infant dyads have shown that infants are very sensitive to their interpersonal environment (Murray, 1988). The evidence to date indicates that because of its impact on maternal functioning, PND can impair infant development through disruption of the mother -infant relationship (Murray & Cooper, 1997a). The research conducted to date underscores the gravity of recognizing the role that contextual or environmental factors play in affecting children with depressed caregivers. Offspring of depressed parents are at greater risk for relationship and behavioural difficulties. The research also provides support for the early preventative intervention in families with depressed caregivers (Cicchetti, Rogosch & Toth, 1998).

A key to successful prevention of the detrimental short-term and suspected effects of PND on children is the modification of the hypothesized factors that are linked to negative outcomes in high risk children (Bloomquist, August, Bromach, Anderson & Skare, 1996). This includes the importance of targeting PND and involving the other parent whenever possible, as the current study sets out to do.

1.6  TREATMENT OF PND
A strong argument exists for the swift, appropriate and effective treatment of PND. To being with, PND if left untreated tends to be a chronic condition (Nott, 1987). Experiencing a chronic depression has an effect on subsequent personality functioning. A woman may have a marked loss of self-esteem and develop a pervasive sense of hopelessness and
helplessness, resulting in increasing social withdrawal and difficulty dealing with others (Boyce, 1994).

Secondly, PND is not an insignificant problem. In Western Australia alone, each year between 25,000 and 50,000 women and their families are affected by PND (Pope, 1995).

As reviewed, research now unequivocally points to increased risk of substantial adverse impact for infants of women with PND. This impact has been empirically observed in the areas of attachment, social, emotional, cognitive and behavioural development of children (Bloomquist et al., 1996; Caplan et al., 1989; Coghill et al., 1986; Cichetti et al., 1998; Cohn et al., 1986; Cohn, Campbell & Matias., 1990; Field et al., 1999; Murray, 1992; Murray, Hipwell, Hooper et al., 1996; Murray & Cooper, 1997a; Sinclair & Murray, 1998; Murray et al., 1999; Stein et al., 1991; Wrate et al., 1985).

On a purely pragmatic basis, the sooner treatment is sought and begun the better for all involved, the mother, the relationship, the family and the infant. The longer depression goes undetected and untreated the more complicated the picture gets. More resources are required, and it is more likely it is that you will lose clients due to moving away etc (O'Hara & Zekoski, 1988).

Another important reason for treatment, is that studies have shown that up to 60% of women with PND will have another episode. Thus, it may be valuable to target women for primary intervention, both to resolve the current episode and to prevent the development of subsequent episodes (Whiffen & Gotlib, 1993).

In comparison with other mental health issues, PND is particularly well suited to preventive interventions because the birth is a clear indicator; there is a defined temporal onset period. The presence of well-documented risk factors define the target population and women have lots of contact with health care professionals during this period of time (Wisner & Wheeler, 1994).

Lastly, detection, prevention and treatment of PND is possible. Ethically, then, as health professionals we are obliged to address it (Oates, 1994a).
1.6.1 IDEOLOGY VERSUS REALITY

It is widely agreed that enormous changes and improvements have occurred in maternal health in the post war years (Brockington, 1995; Kumar et al., 1995). However, PND and postnatal psychosis have shown no parallel improvement in incidence rates. Despite PND being well known now for over 20 years, in general, not enough is being done to prevent and successfully treat the condition (Brockington, 1995).

Several reasons have been floated for this, and possibly a combination of factors hinders progress. To begin with, women often do not seek help or if they do, they are not as likely to take up offers of treatment. Other reasons centre on problems with detection, minimization and failure to treat appropriately, all of which are connected to a lack of research in the area of treatment.

1.6.2 SEEKING HELP

Although it has been proposed that gender differences in socialization make it easier for women to engage in help-seeking behavior without losing face (Thurtle, 1995), this does not seem to be the case with PND. Throughout the literature, researchers continually report the reluctance of women to seek treatment for PND. Unfortunately, once they have made the attempt, many women have been disappointed with the response received (O’Hara & Zekoski, 1988).

Moore (1992) explains that women, who feel there is something wrong, may be reluctant to approach a health worker, either because they blame themselves for ‘not coping’ or are fearful of being diagnosed with a mental illness and stigmatized.

These views are reinforced and built upon by Brockington (1995), who explains, some women are ashamed. Some realize they are ill, while others have difficulty recognizing their symptoms as being other than ‘normal’. Some women are apprehensive about stating their symptoms for fear of losing their baby, and some believe it implies failure as a mother.

Boyce, Stubbs & Todd (1993) report subjects in their study stated they would not have sought treatment whilst they were depressed. This may be due to the fact they only realize
in retrospect, once they begin to recover, that what they were experiencing was not normal. This has been suggested previously (Cox, Connor & Kendell, 1982). Support for this notion was also found by Whitton, Warner & Appleby (1996) where over 90% of their sample recognized in retrospect something was wrong, but over 80% had not reported their symptoms to any health care professional.

Additionally, women may be discouraged by family from seeking support because of perceived stigma or cultural expectations (Matthey, Barnett & Elliot, 1997). Women from minority cultures often have additional problems when they present to health workers because they may express themselves in different ways, making them more vulnerable to having their symptoms dismissed or misinterpreted (Moore, 1992).

These views are illustrated clearly by two empirical studies. Robinson and Young (1982) screened 288 British mothers attending baby health clinics between 6 and 8 weeks postpartum. Almost 20% were found to reach clinical levels of depression or anxiety at this time. Only 50% of identified women accepted an offer of psychiatric help when the recommendation was made. At six-month follow up, this treatment refusal was maintained. The cited reasons for this refusal were:

- The stigma of psychiatric treatment as perceived by the client
- The stigma of psychiatric treatment as perceived by the spouse
- Patient's perceptions of their own well being differing from that of the treatment agency. That is, a number of women hold the belief that it was normal to be depressed in the postnatal period
- The inconvenience of attending a psychiatric consultation.

Robinson and Young (1982) suggested that the rate of treatment refusal may not have been so high, had the women been familiar with the health care workers offering the intervention, that is, if a prior relationship had been established. This would be possible if mental health workers were included in the antenatal classes.

Taylor et al. (1994) investigated the help seeking behaviour of 46 women with elevated EPDS scores at 6-8 weeks post partum. Only five women had sought help. Four of these women sought assistance from their General Practitioner or their health visitor. Partners
were nominated as the most utilized source of support, with 45% of women in this sample discussing their concerns with their partner, once again, underscoring the importance of partner support.

In a large Australian population survey (n=3004), where self-reported prevalence of PND was found to be 18.5%, only 49.1% of respondents sought help for their depression (Wilson, Wakefield & Taylor, 1992). In this study help was most commonly sought from their GP (28.4%), hospital doctors (4.6%), nursing staff (3.8%), social workers (2.1%) or self-help organizations or family and friends (3.5%). The authors emphasize the scope of the problem, noting they believe that the figures obtained are underestimations due to non self-recognition. They reinforce the need for vigilance from health workers when dealing with postnatal women (McLennan, Wilson & Taylor, 1996).

1.6.3 PROBLEMS WITH HEALTH CARE PROFESSIONALS

Should women overcome the barriers to seek treatment, the second major issue arises, lack of accurate diagnosis and subsequent treatment (Boardman, 1987; Cox, 1986; Gunn et al., 1998; Small et al., 1997; Richards, 1998;). A host of reasons has been cited for this including, lack of confidence (Cox, 1986), and knowledge (Boardman, 1987; Gunn et al., 1998; Small et al., 1997;) and confusion with definitions (Cox, 1988; Najman et al., 2000; Pope & Watts, 1996; Pritchard & Harris, 1996). The end result of this, is that often women are deterred from seeking further treatment.

A more insidious reason that has been proffered is that health care professionals see PND as a 'soft' or 'minor' depression (Whiffen, 1992). Anecdotally, there does seem to be reluctance to deal with cases of PND by Mental Health Teams in Australia who regard PND as a community health issue. Brockington and Cox-Roper (1988) also comment that psychiatric services often fail to see cases of PND because PND doesn't reach their threshold for referral and there seems to be general uncertainty about PND as a medical concept.

Lastly, perhaps part of the reason for the poor diagnosis and lack of appropriate treatment in this area is due to the paucity of research on treatment. Calls abound for research to be conducted on the long-term impact of various types of therapy involving not only the
mother, but also the partner, advocating a more systemic approach (Barnett, 1992; Buist, 1995; 1996a; 1998; Kumar et al., 1995; O'Hara & Zekoski, 1988; Whiffen & Gotlib, 1993).

However, many researchers have encountered difficulties recruiting women and their partners for participation in research (Appleby & Whitton, 1993; Fairchild, 1995). Once participants have been recruited, high attrition rates have been reported, calling into question the validity and reliability of the results (Elliott, Sanjack & Leverton, 1989; Stamp, Williams & Crowther, 1996; Whitton et al., 1996).

The present research endeavours to overcome some of these obstacles. With a view that more research into treatment will shed light on the most efficacious treatments, hence improving knowledge, confidence, numbers being treated and treatment outcomes.

1.7 PREVENTION AND TREATMENT
The aim of preventative interventions is to minimize the emotional, financial and social costs associated with PND that impact on the individual, the family and the community. Preventative interventions also aim to reduce the likelihood of PND reoccurring for those already afflicted and the overall incidence through education and mental health promotion strategies (NHMRC, 2000).

Prevention can be subdivided into three categories of treatment, primary, secondary and tertiary (Cox, 1986; Mrazek & Haggerty, 1994; Patton, 1997). The aim of primary prevention is to counterbalance adverse factors to reduce the risk a woman will develop PND. Primary prevention can be further categorized as universal, selective or indicated (Buist, 2000; Holden, 1994; Jenkins, 1992).

Secondary prevention aims to make an early diagnosis and commence appropriate treatment with the intention of shortening the length of episodes of the disorder, minimizing chances of transmission and limiting the adverse consequences of the disorder (Holden, 1994; Jenkins, 1992). This may include medication or pharmacological treatment, individual or group counseling, developing social support networks, or attending self-help groups.
Tertiary prevention aims to reduce the effects of established depression on the family and on attitudes and preparation for a subsequent pregnancy (Holden, 1994; Jenkins, 1992). This may include involving family in treatment and building resilience, development of relapse prevention strategies and prophylactic treatment.

This study focuses mainly on secondary prevention but also goes some way to addressing tertiary prevention. The current information available and recommendations on prevention measures, including primary, secondary and tertiary prevention or treatment of PND will be presented. The importance and value of primary prevention is acknowledged. However, because it is not the focus of this study, it will be briefly summarized.

1.8 PRIMARY PREVENTION OF POSTNATAL DEPRESSION

1.8.1 UNIVERSAL PREVENTION MEASURES

There are many psychosocial prevention strategies that may prove to be useful at a community level to reduce the incidence of PND developing. These include providing easily accessible information about perinatal mental health issues and providing programmes that focus on teaching and enhancing strategies to optimize mental health and family functioning.

A number of studies have explored the usefulness of universal prevention strategies as ways of reducing the prevalence of maternal mental health problems. Interventions such as providing information (Broussard, 1976; Midmer, Wilson & Cummings, 1995), developing support networks or providing support (Morrell, Spiby, Stewart et al., 2000; Shields, Reid, Cheyne et al., 1997), identifying and exploring the usefulness of expectations surrounding parenting (Coffman, Levitt & Brown, 1994; Cowan & Cowan, 1988; Meleis & Swendsen, 1978; Midmer et al., 1995), stress management strategies (Black-Olien, 1993; Halonen & Passman, 1985; Rees, 1995) and skill building to improve interpersonal relationships (Black-Olien, 1993; Cowan & Cowan, 1988) have been trialled.

These studies were not specifically targeted at PND, nor have they taken individual differences such as personality factors into account, however they do show some
promising findings, reporting some benefits from the intervention for perceptions of adjustment, the level of support, the marital relationship or perception of the infant.

1.8.2 SELECTED AND INDICATED PREVENTION FOR PND
Selective or indicated primary prevention approaches are also commonly known as early interventions, one example of this is antenatal screening.

1.8.2.1 Antenatal screening
Early detection of PND would enable preventative measures to be undertaken and early treatment to be instigated in an economic and efficient way (Buist, 1996b; 2000; Righetti-Veltema, Conne-Perrreard, Bousquet & Manzano, 1998). Building a relationship with a woman (and her partner) early in the pregnancy provides a window of opportunity to be more able to accurately assess what is normal and not normal for this family and provide support if needed.

To this end, many researchers are currently attempting to develop antenatal screening questionnaires for this purpose (Beck, 1998; Righetti-Veltema et al., 1998; Webster, Linnane, Dibley et al., 1997).

1.8.2.2 Antenatal Intervention
Although community awareness of PND has improved in recent years, health care workers continue to document that women are not well informed about PND. It is not routinely discussed in all antenatal classes or in the hospital after the birth (Moore, 1992).

Criticism has been leveled at the structure and content of some antenatal education classes. It is claimed they are too focused on the birthing process and not on the outcome of a healthy baby. There is not enough information on adjustment to parenting and not enough information on the reality of parenting and how to build resilience (Buist, 1995; 1996a; 1996b; Holden, 1991).

Interventions trialled to date have many of the same problems that treatment research in this area has, for example, small sample sizes and use of limited number of intervention types. There is a great need for more research to tease out differences in requirements for
different groups within the large body of 'at risk' women. Lastly, it needs to be recognized that given the limitations of the predictive validity of known risk factors, there will always be a group of women who do not have the identified risk factors who develop PND.

These interventions have taken the form of developing support networks (Brugha, Wheatley, Taub et al., 2000; Buist, Westly & Hill, 1999; Elliot, Sanjack & Leverton, 1989; Field, 1980; Stamp, Williams & Crowther, 1996; Wolman, Chalmers, Hofmeyr & Nikoderm, 1993) home visiting (Olds, Ekenrode, Henderson et al., 1997) providing information (Barnard, Booth, Mitchell & Telzrow, 1988; Elliot et al., 1989; Stamp et al., 1996; Webster, Linnane, Dibley et al., 1997), improving communication and problem solving skills (Barnett & Parker, 1985; Brugha et al., 2000), exploring parenting expectations (Buist et al., 1999; Field, 1980) and debriefing after traumatic births (Clement, 1995; Lavender & Walkinshaw, 1998).

In the main, results of antenatal intervention programmes for women at risk of PND have been disappointing.

As previously discussed, one of the most common risk factors for PND is lack of partner support. The studies that included partners in the intervention showed positive outcomes (Buist et al., 1999; Elliot et al., 1989). Both sets of researchers noted that it was important to pay attention to the format and structure of interventions offered to partners and recommendations were made to provide briefer interventions to optimize participation rate. It is assumed that men are more likely to participate in treatment if they believe it is manageable in terms of time and effort required.

1.9 SECONDARY AND TERTIARY PREVENTION FOR PND
Once a postnatal mental health problem has been recognized, appropriate information and treatment should be offered to the woman and her family. This may include assessment of physical and mental health, social supports, the mental state of her partner, the mother's safety and the safety of the baby and any other children. Co-existing problems such as alcohol or drug problems and family violence also need to be assessed and addressed if necessary (Kowalenko et al., 2000).
1.10 TYPES OF TREATMENT
The following review will encompass research information on the current status of a variety of approaches to treatment of PND. This will include pharmacological, hormonal and psychotherapeutic and self-help approaches.

1.11 BIOLOGICAL TREATMENT
Use of Pharmacological agents in the treatment of PND
Medication addresses symptom reduction. It does not address underlying cause or maintaining factors of depression (Bhatia & Bhatia, 1999). However, medication can be of assistance in lifting the depression level to enable the patient to address underlying psychosocial issues. Additionally, there is a group of people who are not interested, for a variety of reasons, in psychosocial therapy. They still need some form of treatment for their depression, which medication provides.

For obvious ethical reasons, randomized, controlled drug trials are problematic to conduct during pregnancy and whilst a woman is breastfeeding. Consequently, the data that is currently available does not reach the standard of evidence that is preferred (Kowalenko et al., 2000). Thus if at all possible, the preference is to avoid medication during pregnancy and lactation. This needs to be balanced with the knowledge that untreated mental illness constitutes considerable risk to the mother, the infant and the rest of the family.

Aside from the lack of research, one of the main difficulties with medication as a treatment for PND is that many women are not keen to take antidepressants and hence, lack of compliance or sporadic compliance is often a problem, consequently, reducing the efficacy of the medication.

Part of the reluctance to take medications is the side effects women experience or fear they will experience. Side effects including sleeping difficulties, lowered libido and weight gain, need to be considered at the outset of treatment (Raskin, 1999). The type of effects noted include sleeping difficulties, lowered libido and weight gain.

Sleep is a major concern for women in the postnatal period. Infants usually do not sleep throughout the night until about 4 months, thus medication that causes excessive sedation
at night, when mothers need to be awake to feed, is not appropriate (Buist, 1993; Raskin, 1999).

Another side effect that needs to be considered is insomnia. Fatigue is typical during this period, and for those suffering from PND this is usually excessive and is a significant disability. Some of the antidepressants available on the market can cause insomnia, which is not well tolerated in this group, and needs to be contemplated when medication is prescribed (Balon, 1995; Buist, 1993).

Lack of libido or sex drive is another common symptom of depression that women are keen not to have exacerbated. However, some medications will lower libido further, often creating substantial distress in women, because they are aware that their partner's sex drive has usually not diminished in any way. They then feel additional pressure and concern, because they are often repeatedly rejecting their partner's advances, again, creating another source of potential marital conflict (Balon, 1995).

Lastly, weight gain, a side effect in many tricyclic antidepressants, is not well tolerated in women with PND. Commonly, women are already negative and concerned about their post pregnancy body image. For this reason, new antidepressants may be more appropriate (Bhatia & Bhatia, 1999).

A very important issue that is not often presented in the research literature is that antidepressant medications are not always effective for everyone. A study of 18 married mothers with PND, treated with a range of antidepressants, illustrates this succinctly (Bromberger, Wisner & Hanusa, 1993). Measures of depression and marital satisfaction were taken pre and post 12 weeks of medication. Depression remitted in 12 of the 18 women, but in six women, depression did not improve, despite being similar at pre test. The six women who did not improve all reported significantly higher disaffection toward their husbands, highlighting the importance of addressing underlying psychosocial factors.

Other considerations in the use of medications are response time and relapse rates. Response time to antidepressant medication generally requires several weeks, at a specific therapeutic dose. In 60-70% of people, symptoms will reduce within three weeks of
initiation of medication. It is recommended that treatment continues until remission of symptoms occurs, and a continuation of medication for up to 20 weeks is common (Depression Guideline Panel, 1993). Relapse after discontinuation of medication has been found to occur in 25% of people within two months and 50% within six months (Depression Guideline Panel, 1993).

Cox (1986) suggests another deterrent to women seeking assistance with PND is that pharmaceutical companies continue to issue warnings regarding the use of antidepressant medications whilst breastfeeding, despite the absence of clear cut findings regarding safety.

1.11.1 TYPES OF MEDICATION
Antidepressant medications from various families of drugs are used in the treatment of PND, ranging from the latest selective serotonin inhibitors (SSRI's) to the older and currently less favored benzodiazepines.

The serotonergic system is complex and involves various postsynaptic receptors. Dysregulation of postsynaptic serotonergic function has been implicated in depression (Mann, Stanley, McBride & McEwen, 1986). The ability of antidepressants to alter serotonergic and noradrenergic function has been the suggested mechanism by which these agents are effective in the treatment of depression (Joffe & Cohen, 1998).

The development of SSRI's has focused attention on the specific changes in the 5-HT postsynaptic receptors that may contribute to their antidepressant effect (Joffe & Cohen, 1998). SSRI's have become the agents of first choice in the treatment of depression because of their safe profile (Gupta, Masand & Rangwani, 1998). In particular, in cases of overdose they have minimal anticholinergic effects. Overall, they have fewer side effects, better tolerance, faster onset of action and generally require a single daily dose (Jermain, 1995; Szewczyk & Chennault, 1997). Within this family include drugs such as Fluoxetine (trade name: Prozac), Fluvoxamine (Luvox), Paroxetine (Paxil) and Sertraline (Zoloft).

Another new addition to the medication available for depression, Venlafaxine (Effexor), has been found to be as effective as the SSRI's, with similar side effects, such as increased
blood pressure in high doses. It requires very slow titration because of severe nausea experienced (Bhatia & Bhatia, 1999).

Monoamine oxidase inhibitors (MAOI's) are usually prescribed after non responsiveness to other antidepressants because of side effects, their interactions with other drugs and certain common foodstuffs (Jermain, 1995; Szewczyk & Chennault, 1997).

Tricyclic antidepressants are the most documented, and apart from doxepin, have not been reported to cause problems for infants. Dothiepin in standard dosage is commonly prescribed and is useful for anxiety symptoms, which are often a salient feature of PND (Kowalenko et al., 2000; Wisner et al., 1999). Women who are taking oral contraceptives may require higher doses of tricyclics because of the induction of hepatic enzymes responsible for drug metabolism.

Benzodiazepines, once the most commonly used antidepressants are no longer recommended because of problems with addiction, toxicity in overdose and side effects (NHMRC, 2000).

1.11.2 BREAST FEEDING
The use of psychotropic medications during lactation remains an understudied and controversial topic (Llewellyn & Stowe, 1998). Because of documented benefits, breastfeeding is an important consideration in treating women with postnatal depression (Llewellyn, Stowe & Nemeroff, 1997). Breast milk is portable, economical and resistant to spoilage. Breastfeeding is reported to have psychological and physiological benefits to the mother (Cohen & Altsheuer, 1997; Llewellyn & Stowe, 1998). Infants who are breastfed have decreased incidence of gastrointestinal illness, respiratory illness and all other illnesses except infant trauma (Beaudry, Dufour & Marcoux, 1995). Some research even suggests increased IQ levels in breastfed babies (Lucas, Morley & Cole, 1992).

The majority of women who plan to breastfeed plan to do so for either the medical benefits of breastfeeding, the social pressure, a perception of enhanced mother-infant bonding or economics. Maternal plans however, are at times interrupted by the development of mental illness (Misri, Sinclair & Kuan, 1997; Schou, 1998). The additional stress, pressure and guilt
that mothers feel to continue with breastfeeding is a factor that needs to be taken into consideration when looking at treatment options. A proportion of mothers are adamant in their intention to breastfeed their infants and will refuse pharmacological treatment if told they must stop breastfeeding (Wisner, Perel & Findling, 1996).

Review of the literature indicates a lack of controlled studies with much of the documented research having been based on individual case reports (Austin & Mitchell, 1998; Buist, Norman & Dennerstein, 1990; Schou, 1998; Wisner et al., 1996). Several factors confound the existing research, including the use of other medications whilst pregnant and/or whilst breastfeeding, lack of controls for maturity of the breast milk, lack of standardization in sampling and timing after maternal medication, variations in assay sensitivity and lastly, a bias of case reports towards adverse effects, which perhaps does not represent the entire clinical picture (Austin & Mitchell, 1998).

What is known, is that almost all studies have found antidepressants are excreted in breastmilk (Misri, Kim & Kostaras, 2000; Misri, Kostaras & Kostaras, 2000; Wisner et al., 1996; Yoshida, Smith & Craggs, 1998). However, harmful effects have not been reported (Baum & Misri, 1996; Llewellyn et al., 1997). Long-term studies evaluating behavioral effects and tetrogenicity are not yet available. Should effects be found, it is thought they will most likely be expressed in long term neurobehavioral effects detected by developmental milestones and cognitive ability (Austin & Mitchell, 1998; Clayton, 1998).

Some reviewers are reporting more definite conclusions about tricyclics and SSRI's stating they appear to be relatively safe in breastfeeding (Austin & Mitchell, 1998). Others report that, in their view, antidepressant use is acceptable if monitoring of the mother-baby occurs (Misri, Kim & Kostaras, 2000; Wisner et al, 1996).

On balance, several factors need to be weighed up and taken into consideration in deciding to recommend use of medication. The desire to breastfeed must be weighed up against the need for rapid treatment. Should medication be considered, the choice of antidepressant needs to be based on prior responses to medication, the individual's specific symptoms, side effects, personal history and lifestyle, co-existing illnesses, cost of medication and individual preference (Majeroni & Hess, 1998; Szewcyk & Chennault, 1997). Llewellyn &
Stowe (1998) assert that no clinical decision is risk free and the factors influencing the treatment decision should be documented.

It has been suggested that timing of feedings or administering medications at times when plasma concentrations are likely to be lowest may be beneficial and more acceptable to some consumers. Careful observation of both mother and infant is recommended and the lowest effective dose is suggested (Kowalenko et al., 2000). These cautions and fears, and the lack of specific treatment guidelines, have lead to an additional problem in some cases. Women are often prescribed subtherapeutic doses of antidepressants by their family practitioners (Buist, 1993; Kumar, 1994). This increases risk for chronic dysthymia and recurrent depression, therefore increasing risk for potential negative impact on infant and family relationships.

1.11.3 ELECTROCONVULSIVE THERAPY
Electroconvulsive therapy (ECT) may be utilized for severe PND or recurrent cases that have not responded to other therapeutic options (Nonacs & Cohen, 1998; Stowe & Nemeroff, 1995). Obviously, ECT is administered in an inpatient facility, where close monitoring is available. There are few long-term studies conducted on its efficacy for use with PND. Miller (1994) reviewed the use of ECT for depression in pregnancy, for 300 case reports, concluding it is relatively safe, with 9.3% reporting side effects of vaginal bleeding, abdominal cramps and benign foetal arrhythmia.

1.11.4 TREATMENT OF PND USING HORMONAL SUPPLEMENTS
The use of hormonal supplements such as oestrogen and progesterone, as an effective treatment for PND has been suggested by several researchers but is hindered by a lack of outcome studies (Dalton, 1980; Granger & Underwood, 2001; Gregoire, Kumar & Everitt, 1996; Harris, 1994; Joffe & Cohen, 1998).

1.12 PSYCHOSOCIAL APPROACHES TO TREATMENT OF PND
Because of the dearth of information regarding biochemical interventions and the reluctance of women to use these interventions, many women choose a psychosocial approach. Individual counselling, individual psychotherapy, group psychotherapy and self-
help approaches are examples of the variety of psychosocial approaches for the treatment of PND that have been advanced.

1.12.1 INDIVIDUAL COUNSELLING

Individual counselling is best described as non-judgmental listening with the aim of assisting people to find appropriate methods for tackling the problems they are faced with (NHMRC, 2000). Counselling is recommended as a useful form of treatment because it can assist people in making sense of their situation, in decision making and organizing self care plans and increasing social support (Kowalenko et al., 2000).

Rogers (1951) first progressed this mode of therapy with his non-directive or client-centered approach. Since then many different approaches have been advanced. The client-centered approach is a relationship-based approach, which is said to depend more on the emotional development of the counsellor than it does on specific techniques (Cox, 1986). Counselling can be useful for mild depression, with the benefits that it can be cost effective in the number of sessions required, and can be conducted by health professionals with additional training, that is, specialist mental health skills is not necessarily needed (NHMRC, 2000).

The importance of therapeutic listening and providing extra emotional support in the population of women with PND has been consistently advocated, largely based on clinical work (Cox, 1986; Cutrona & Troutman, 1986; Kumar & Robson, 1984). Support for this approach is also found in the studies that follow.

Holden, Sagovsky and Cox (1989) assessed the efficacy of non-directive counselling on PND in a British study of 55 women who were randomly assigned to either a treatment or control group. The treatment group (n=26) received 8 or 9 individual counselling sessions of at least 30 minutes duration, whilst those in the control condition (n=24) received routine health visitor care. The counselling occurred over a 13-week period, after which posttest measures were taken. Half the women in this study were taking antidepressants, although they were evenly scattered throughout the groups. Nineteen health visitors who had received 6 hours of counselling training conducted the intervention. The aim of the counselling was to focus on the mother, not the infant.
At 3-month post treatment 69%, of women in the treatment group had recovered, compared to 38% of the control group (Holden et al., 1989). Thus, one third of the treatment group did not recover during intervention, including five women who had personal or family histories of depression. It may be that these women required further intensive psychotherapy from mental health practitioners, with more extensive psychotherapeutic training. Another difficulty with the validity of this study is the possibility of enormous variability amongst the 19 health workers. No check on intervention integrity was made to ensure that the intervention received was consistent.

Wickberg and Hwang (1996) replicated this study in the Swedish population with a non-medicated group of 15 mothers who received 6 weeks of one hour non-directive counseling by 17 nurses with minimal training (4 half days). Supervision sessions were conducted for these health workers in an attempt to maintain some treatment integrity. A control group of 21 mothers who received routine care was used as comparison. Six of the treatment group and 9 of the control group had experienced prior episodes of depression. In contrast to other studies, a third of this sample were single mothers. Significant improvements in mood for the treatment group, in comparison with the control group, occurred post treatment. Eighty percent of the intervention group showed no evidence of depression at posttest, in comparison with 25% of controls. This study indicates that non-directive individual counselling is effective in reducing PND, in the absence of medication, for both single or married women. It is not known whether the positive intervention effects were stable over time.

Gelfand, Teti, Seiner and Jameson (1996) utilized experienced child health nurses to assess the impact of long term, home-based visit intervention with 37 mothers with PND and 36 depressed mothers who received usual care, i.e. GP and child health regular checkups. The intervention consisted of 29 visits over a 12-month period. Visits occurred every 1 to 3 weeks. The intervention, which was focused on improving parenting ability, aimed to build the mother's self-confidence, reinforce existing parenting skills and teach new skills. Women were actively encouraged to make use of community resources and increase social support networks. The child health workers provided both emotional and practical support to mothers. Women were referred from local mental health services, 85%
had experienced depression previously. Groups were equivalent on marital status, age, age of infant and SES. Pre and posttest measures of depression, social support, parenting stress, general life stress, parental self-efficacy and parent-child attachment were taken.

Mothers in the intervention group had significantly improved depression and general life stress scores post intervention. The control group performed significantly poorer on maternal punitiveness, social support and significantly more of their infants were insecurely attached. It appears that even though the focus of the intervention was on improving parenting competence, the additional emotional and practical support provided over the 12-month period by the nurses positively affected depression levels.

1.12.2 PSYCHOTHERAPY
Psychotherapy's overarching aim is to decrease the individual's presenting problems whilst taking into account individual vulnerability factors. It also aims to reduce the reoccurrence of the problems, improve self-esteem and self worth, improve functioning in interpersonal relationships and teach relapse prevention strategies (Holden, 1994; NHMRC, 2000). This is achieved through assisting the individual to identify helpful and unhelpful patterns in cognitions, emotions and behaviour. Psychotherapy also encourages an understanding of the links between past and present experiences and facilitates the derivation of a personal meaning of these experiences (Garfield & Bergin, 1994; Kazdin, 1994). For these reasons, psychotherapy is considered to be likely to be the most effective treatment for depression in the long term (Holden, 1994).

From the end of the nineteenth century to around the 1960's psychotherapy was dominated by the psychoanalytic approach and its derivatives. Since this time an enormous increase has occurred in the number of different forms or orientations of psychotherapy, with Kazdin (1994) making reference to 400 different types of recognized psychotherapy. Some of the more well known orientations are Cognitive Behavioural Therapy (Beck et al., 1979; Lewinsohn, 1974; Seligman, 1975), Interpersonal Psychotherapy (IPT, Klerman, Weissman & Rousaville, 1984), Self Psychology and Gestalt Therapy.

1.12.3 EFFECTIVENESS OF PSYCHOTHERAPY IN GENERAL DEPRESSION
Cognitive Behavioural Therapy (CBT) is one of the most effective psychological treatments for unipolar depression (Dobson, 1989; Young, Beck & Weinberger, 1993). Thase (1996) suggests that CBT is distinguishable from dynamic or interpersonally oriented therapies in a number of important ways.

Firstly, CBT is almost always viewed as time limited. Secondly, the therapist plays an active role, approaching the activity level of a coach or teacher. Thirdly, case formulations and treatment strategies are guided by the cognitive model of psychopathology (Beck, 1976). Specific treatment strategies are chosen to address dysfunctional patterns of thoughts, feelings and behaviors, and, lastly, the effects of treatment on thoughts, feelings and behaviors are monitored during the course of therapy (Thase, 1996).

Dattilio and Freeman (1992) describe CBT as differing from traditional modes of psychotherapy because it is a collaborative process of empirical investigation, reality testing and problem solving between the therapist and client.

Within the orientation of CBT itself, various theorists have emphasized different aspects of cognitive and behavioural elements and combined them in different ways to different extents (Hollon & Beck, 1994). For example, Rational Emotive Therapy (RET, Ellis, 1980) and Cognitive Therapy (Beck, 1976), the two more purely cognitive therapies, emphasize the exploration of idiosyncratic meaning systems and stress rationality as the primary processes for change.

Among the more behaviorally oriented CBT approaches is Stress Inoculation Training (SIT, Meichenbaum, 1977). This approach combines efforts at cognitive restructuring with training in verbal self-instruction and behavioural self-management techniques. Clients are encouraged to apply these techniques in situations they find stressful (Meichenabum, 1977).

Cognitive strategies utilized in CBT include explanation of the cognitive model, thought monitoring, identification of irrational or unhelpful thinking styles and underlying beliefs, questioning the evidence for these thinking styles and beliefs, actively challenging them and cognitive rehearsal and replacement imagery (Dattilio & Freeman, 1992). Behavioural
strategies include activity scheduling, graded task assignments, increasing pleasant activities, relaxation training, social skills training and problem solving training (Thase, 1996).

In terms of performance with other psychotherapies, CBT has been found to be superior for depression. Dobson (1989) conducted a meta analysis of 28 studies comparing CBT with other therapeutic modalities over an average of 14.9 weeks. CBT was more effective in the treatment of mild to moderate unipolar depression than no treatment or pharmacotherapy, behaviour therapy or other psychotherapies when depression levels were measured using the BDI (Dobson, 1989). CBT has also been found to be equally as effective in reducing depression as antidepressant medications (Beck, Hollon & Young, 1985; Elkin, Shea, Watkins et al., 1989; Hollon, DeRubeis & Evans, 1992).

More recently, De Rubies, Gelfand and Tang, (1999) repeated this finding, by comparing four major randomized trails (Elkin et al., 1989; Hollon et al, 1992; Murphy, Simons & Wetzel, 1984; Rush, Beck & Kovacs, 1977). Again, the results indicated that antidepressants were not superior to CBT for severely depressed outpatients.

Although the great majority of evidence pertaining to the effectiveness of time limited CBT for depression has been derived from studies using predominantly or wholly female samples, there is evidence accumulating that CBT is also effective in treatment of depression in men (Jarrat, Eaves, Grannemann & Rush, 1991; Thase, Reynolds, Frank, et al., 1997). This is obviously an important finding given the accumulating evidence of the increasing risk of depression in the male partners of women with PND.

However, the question of whether psychotherapy alone was effective in the treatment of severe depression or whether treatment combined with antidepressants was most efficacious remains.

Looking at the differences between group and individual therapy, a meta analysis of randomized trials for acute major depression found that the effectiveness of group and individual CBT was 46.6% for outpatients and 58.3% for inpatients. The overall effectiveness of individual CBT was 50.1%, and for group CBT, 39.2% (Depression
Guidelines Panel, 1993). Interestingly, the treatment effect of a 50% symptom reduction was found approximately two weeks later in the psychotherapeutic intervention, than in the pharmacological interventions, implying a benefit lag may apply for psychotherapy, and highlighting the importance of follow-up measures being taken post treatment.

Several studies have found that CBT outstrips pharmacotherapy in prevention of relapse following acute phase treatment (Blackburn, Eunson & Bishop, 1986; Hollon et al., 1992; Kovacs, Rush & Beck, 1981). But at this stage, the efficacy of CBT in prophylactic treatment has not been adequately evaluated due to lack of sufficiently long-term follow-up measures being taken post treatment and difficulties in precise definition of relapse (Blackburn et al., 1986; Hollon et al., 1992; Kovacs et al., 1981).

The drawbacks of CBT also need to be considered in decisions regarding treatment. The amount of time and commitment required from patients in undertaking treatment can be a deterrent for some people. As previously stated, not all patients are interested in psychotherapy and would prefer not to address psychosocial issues. A basic level of literacy is required for many forms of psychotherapy, including CBT. Finally, approximately 10-40% fail to complete treatment, which is a similar non-compliance rate to pharmacotherapy (Evans, Hollon & De Rubeis, 1992).

1.12.4 EFFECTIVENESS OF PSYCHOTHERAPY IN PND

Unlike pharmacotherapy, there are no contraindications for use of psychotherapy with PND and there are few limitations in terms of who can be selected for psychotherapy, giving it larger applicability than medications (Stuart, 1999).

Obviously, women who are highly suicidal or who are very functionally impaired will require hospitalization and undoubtedly medication or ECT. However, psychotherapy can be used in conjunction with these interventions.

Although many clinicians and researchers have recommended the use of psychotherapy in the treatment of PND (Brierly, 1988; Cooper & Murray, 1997; Epperson, 1999; Olioff, 1991; Stowe & Nemeroff, 1995; Stuart & O'Hara, 1995; Susman, 1996), there is a lacuna of published research in literature. Specifically, empirical research is lacking in comparing the
effectiveness of various types of treatment using standardized programmes and trained practitioners.

1.12.5 INDIVIDUAL APPROACHES
Four studies conducted have utilized individual psychotherapy to treat PND. In a very well designed study, with a carefully selected sample, Appleby, Warner, Whitton and Faragher (1997) compared one and six sessions of CBT in combination with antidepressant medication (fluoxetine) or a placebo. Subjects who had a severe illness that required close monitoring, a drug or alcohol problem or resistant depression for greater than 2 years were excluded. Roughly 20 subjects were randomly allocated to each group. For ethical reasons, all subjects received some form of treatment. Subjects were predominantly white, middle class, with approximately 70 percent in a current relationship. A psychologist delivered the therapy over a 3-month period. All subjects had received a diagnosis of PND prior to entry and measures of depression were taken at 1, 4, and 12 weeks. A drop out rate of 30% occurred for various reasons, including making no gains.

All groups recorded significant improvement post treatment. The women who received one counselling session had smaller changes than the other groups. Results indicated that CBT was as effective as the drug therapy for these women, that is combining fluoxetine and CBT, did not produce additional benefit. These results were not followed up over time. However, it is plausible that those receiving more intervention, actually maintained benefits in the longer term due to strategies and techniques learned in therapy.

Cooper and Murray (1997) conducted a study with 194 British women with PND randomly assigning them to one of four treatment conditions: routine primary care, non-directive counselling, CBT with an emphasis on providing structured mother-infant interaction guidance and dynamic psychotherapy, based on the mother’s experience of attachment. Women in the intervention conditions received therapy between 8 and 18 weeks postpartum and 171 completed the treatment. Depression was measured using the EPDS and the SCID. All three treatments were found to be effective at 9 and 18-month follow up. Regardless of this, successful treatment and reduction in depression was not associated with significant improvement in the quality of mother-infant interactions, cognitive development or early infant behaviour problems. Treatment did result in significant
reductions in later infant problems or maternal reports of mother-infant relationship problems.

With a small sample of 12 American women with PND between 2 and 6 months postpartum, Stuart and O'Hara (1995) conducted 12 sessions of a modified form of IPT. An emphasis on role transitions and relationship difficulties was included in the IPT. Fifty percent of the women completed the therapy, and findings indicated significant reductions in depression scores on the EPDS, BDI, the Hamilton Rating Scale for Depression (Hamilton, 1960) and a scale of social adjustment. The major problems with this study were a lack of control group to determine whether it was simply obtaining extra support and attention that caused the improvements, a small sample size and a large attrition rate. It may be that the more depressed women dropped out of the study or that they found the approach inappropriate for them in some way.

Boath, Cox, Lewis, Jones and Pryce (1999) report on a naturalistic study comparing treatment in a specialized parent and baby day unit (PBDU) within a psychiatric day hospital (n=30) with routine primary care (n=30) for women diagnosed with PND. The PBDU is staffed by a multidisciplinary team trained in Rogerian counselling methods. Patients receive individualized treatment, which is a combination of individual counselling, creative therapy, group therapy, family therapy, yoga and relaxation training and medication. Women attended on average for 20.03 weeks, for 15.87 treatment sessions. Huge variations in number of treatment sessions were reported. Women who received routine primary care were seen regularly by their GP and child health nurse. The women who attended the PBDU also continued to see their GP and health nurse. There was no difference recorded in the occasions of service for either group. Women in this study self-selected and were not randomly assigned to interventions. The sample was described as lower socioeconomic, where 20% of the region is unemployed. Both samples were similar on demographic characteristics and depression scores pre intervention. Differences in medications being used were statically controlled for. Measures of depression, anxiety, work and family life, and marital adjustment were taken before intervention, and at 3 and 6 months, post intervention.
At 3 months the women who attended the PBDU were significantly less depressed, less anxious and less stressed than those who had received routine primary care. These differences were still evident at 6 months. No significant differences were obtained in marital satisfaction scores between the groups, but there was more improvement in the PBDU group. The limitations of this study are numerous. The subjects were recruited in two different ways, hence raising the possibility of selection bias. The subjects were not randomly assigned to treatment groups, reducing the power of the conclusions drawn. However, the greatest problem in terms of unraveling treatment efficacy, is that the reader has no idea what part, combination or 'dose' of treatment was most effective. All we can conclude is that treatment is better than no treatment.

To summarize, individual therapy, particularly CBT, has resulted in significant improvements in depressive symptoms in women with PND. However, treatment of women alone does not appear to impact on presenting problems other than for depression. For example, no added benefit has been found on mother infant interactions. More well-controlled, long-term studies are needed to consolidate these findings.

1.12.6 GROUP APPROACHES

When comparing individual and group intervention approaches, several advantages and disadvantages for each emerge. Individual therapy has been advocated because it provides a more individualized approach. It is said to be more personal and intimate and there is more time for in-depth exploration of problems (Yalom, 1975). In comparison, group approaches provide a ready-made peer group that increases available social, instrumental and emotional support. Groups have the potential to decrease isolation and provide a supportive learning environment (Gruen, 1993). Groups also provide the opportunity for clients to test new behaviors and skills learnt within therapy. Group treatment can also be more cost effective than individual therapy (Gruen, 1993).

A major impetus for the development of group approaches in PND research was the relationship between lack of social support and the development of PND. However, disadvantages also exist for group treatment. Group treatment is not appropriate for all clients. Certainly, it is generally considered that the severely depressed and functionally impaired are better served by other forms of treatment, at least initially (Holden,
Some women at this stage may find it difficult to get out of the house to attend a group. If group treatment is the only resource offered, feelings of failure may intensify (Holden, 1994).

Group approaches for the treatment of mental health issues can vary substantially and include self-help, support, education or psychotherapy groups (Pope & Watts, 1996).

1.12.6.1 Self-help and support groups
Postnatal self-help organizations are an important form of networking within our current day society. Some have suggested that they have attempted to fill the gap in support created by the loss of traditional postpartum rituals in our modern community (Honikman, 1999), hence, in some respects, attempting to fill the gap identified by anthropologists and feminist theorists (Cox, 1988; Kazan & Shorne, 1994; Nicholson, 1998; Sherr, 1995; Stern & Kruckman, 1983).

Self-help organizations began in a response to fill the void that new parents felt once the baby had been born. Prior to the birth, this void had been filled by childbirth education classes where the social support and educational process had begun (Boukydis, 1986). These women had been prepared for the labour, the delivery and the birth, but not for the postnatal period.

Self-help groups encourage women to discuss their concerns with other women who have experienced similar issues and provide education and referral information for women and health professionals (Handford, 1985).

Honikman (1999) cites four characteristics of self-help groups. First, they create an environment where knowledge and experience is pooled and shared. Second, they are made up of peers who are living a shared experience, deconstructing the belief that you are alone in your struggle. Third, they involve minimal or no cost. Fourth, the participants have complete ownership of the group.
An important disadvantage of self-help groups is that they attract a broad range of women with varying illnesses and levels of functioning. This can result in inappropriate advice being given and women not having their specific needs met (Fairchild, 1995).

In Australia many postnatal support organizations operate in each state, for example, the Postnatal Depression Support Association in Western Australia. Although the associations are based in metropolitan centres, often large rural centres will also offer self help groups. Currently, self-help groups have not been empirically validated, although anecdotal reports suggest people find them of assistance.

1.12.6.2 Use of psychotherapeutic group intervention

In contrast to self-help groups, psychotherapy groups are informed by a particular therapeutic orientation (Gruen, 1993; Yalom, 1975). Psychotherapeutic groups are facilitated or lead by professionally trained therapists who maintain ethical responsibility for the well-being and progress of their clients. Generally, psychotherapeutic groups are different from self-help groups because they have clear programme and session aims. They are often structured and present specific strategies to assist clients in tackling their presenting problems, and are time limited. Issues are dealt with in a more thorough way, with the added benefit the psychotherapist has of taking into account assessment information and psychosocial issues specific to any particular group member. Psychotherapeutic groups monitor individual progress and are more likely to present specific relapse prevention strategies to enhance and maintain treatment gains.

A fairly blurred distinction seems to exist between support groups and psychotherapeutic groups, dependent, it appears, on the professional training of the therapist (Fairchild, 1995; Fleming, Klein & Corter, 1992). Support groups are also run by professional therapists and some form of initial assessment prior to entrance to the group is often made. However, support groups are generally unstructured and not always time-limited. In contrast to psychotherapeutic groups, the level of empirical treatment outcome measurement may not always occur in support groups.
Fairchild (1995) provides a description of the Duke Postnatal Support Group of North Carolina. Social workers ran an open-ended, fortnightly, unstructured support group over a four-year period. Forty-six women attended in this period, with an average of 5 women attending each group meeting. These were predominantly white middle-class women self-selected from local maternity hospitals.

Fairchild (1995) neglects to report any evidence of assessment measures being used for entrance into the group, or to assess progress or intervention outcomes. No information regarding the diagnosis or severity of participants in the group is provided. The author does provide an account of anecdotal themes of benefit derived from participants’ feedback, namely, reduction of isolation, sharing of information, receiving permission for self-care, obtaining support for continuation of treatment and hope for the future. Unfortunately, although the benefits described sound useful, the lack of adequate evaluation means that the level of research evidence required to draw conclusions regarding the effectiveness of the intervention is not reached. For the clients, the lack of monitoring and evaluation potentially means that needs may be unmet, and subsequent referral when necessary, may not occur.

Additional problems identified with the use of open-ended groups include the variation in needs of older and newer participants. This type of group intervention runs the risk of not being tailored enough for specific sub-group needs.

Three studies, with some form of pre and post measurement, have reported mixed findings for professionally led postnatal group interventions for women.

Rowe, Temple and Hawthorne (1996) evaluated an uncontrolled, ongoing (over 44 weeks) two hour, weekly support group for 50 self-selected mothers with 'post natal difficulties' conducted in Victoria. The women were described as coming from low to middle SES, with infants under six months. The mean age was 29.3 years and 76% were in a stable relationship. These women were not diagnosed as having PND and no formal or standardized measure of depression was obtained. The intervention was an open, unstructured group with women raising topics themselves each session. On average five women attended each meeting and women attended an average of 4.5 meetings. An
undisclosed proportion of mothers also attended individual counselling whilst participating in the group. A 7-item questionnaire constructed by the authors assessing concerns about lifestyle changes, relationship problems, health problems and depression and anxiety was used before week one and five weeks later. The CooperSmith Self-Esteem Inventory (CooperSmith, 1991) was also administered at these times.

Pre and post measures were obtained for 36 (74%) of the sample. Significant improvements in concern about babies' health and in feeding difficulties occurred post group. No significant changes in 'concern' about relationships, depression or anxiety were found, although the means were moving in the expected direction. Self-esteem measures, although improved, did not reach statistical significance after group attendance. The authors conclude that the group intervention was successful. They explain their non-significant findings in terms of the small sample size and the assertion that these women underestimated the extent of their difficulties initially, but, with greater insight, recorded more realistic scores on follow-up. However, the lack of a control group means that these changes may have occurred naturally over time, and cannot be attributed to the intervention. Additionally, the initial self-selection, the potential confounds that were uncontrolled, and response rates are problematic for this study.

Two studies have utilized control groups in their research design. Fleming, Klein and Corter (1992) recruited 44 depressed and non depressed new mothers from a maternity hospital and conducted an unstructured eight session support group, and compared this with a control group (n=83), and a group that received a written transcript of the group sessions by post (n=15). Measures of depressed mood and attitudes towards mothering were taken at six weeks and five months postpartum, as were 15-minute behavioural observations of mothers interacting with their infants.

The social support group had no effect on mood, but some effect on positive mother-child interactions. An increase in negative attitudes towards motherhood, their partners and self-image was found for mothers with depressed mood at the five-month mark. Thus, the intervention was found to be ineffective in improving the mood of mothers, but had some benefit to infants.
One explanation for this finding was that depressed mothers often also have low self-confidence and self-esteem which were enhanced by being surrounded by more confident mothers (Fleming et al., 1992). Another explanation is that the scale used to assess mood, the Current Experience Scale (CES, Fleming et al., 1988) was not of sufficient validity or reliability to accurately measure changes in depression. This scale is not widely known or recognized as suitable for this population. This study also used non-random assignment to treatments, the sample was small and there was no explanation of selection criteria. In addition, only 9.8% of the original sample of depressed women and 12% of non-depressed participated in the study, suggesting possible bias due to self-selection.

In the best designed and controlled group intervention for women to date, Meager and Milgrom (1996) conducted a 10-week structured CBT group programme with 10 women and compared their depression scores with a wait list control. The women in this study had been referred from maternal child health centres. They were representative of a white middle class sample, with half taking antidepressants. Women underwent a clinical interview to establish diagnosis of depression, prior to being randomly allocated. These women had all been depressed for between 6 and 12 months at time of intervention. Measures of PND, marital satisfaction, social support, self-esteem and parenting adjustment, using reliable and valid psychometric tools, were taken pre and post intervention. The results were very promising for depression. A significant decrease in depression occurred within the intervention group, with no such significant change being found for the wait list group. Thus the passage of time is not sufficient to reduce depression in these women. Parenting stress and adjustment scores, self esteem, social support and marital satisfaction did not significantly change for either group at posttest. However, trends in directions towards improvement did occur. It may be that these factors need to be specifically targeted themselves, or that the benefit of treatment takes longer to positively impact on these factors. Another factor may be the high attrition rate; only 60% of the initial sample completed the 10-week group, making the sample small, with larger changes needed to approach significance. Of those on the wait list, only 3 ended up completing the intervention.
Meager and Milgrom (1996) stress that, in future studies, wait lists are not appropriate for women with PND, and they should be offered some other form of environmental and emotional support in the interim.

1.12.7 TREATMENT WITH PARTNERS

Despite increased awareness of the importance of the family system as a whole for understanding the coping and adjustment of individual family members, fathers have been grossly underrepresented in treatment research (Buist, 1998; Matthey, Barnett, Ungerer & Waters, 2000; Soliday, McCluskey-Fawcett & O'Brien, 1999).

Leathers, Kelley & Richman (1997) suggests that bias leading to the exclusion of fathers from systematic investigation came from the psychoanalytic tradition, which emphasized the mother-infant relationship and treated fathers as invisible actors. Another reason nominated, is the new mother is the person most likely to present for help in the postpartum period, making it easier to ignore the father (Morse et al., 2000). It is suggested that the shift in focus from PND having a biological aetiology to the acknowledgment of the importance of social factors has lead to the increased interest in the role of fathers (Leathers et al., 1997). This could also be understood in the light of social change in gender roles that has occurred in the last two decades (Brockington, 1995).

Just about all clinicians and researchers who address the issue of PND unanimously call for inclusion of partners or fathers in treatment of PND e.g., Apfel & Handel (1999), Barnett (1992), Barrows (1999), Boyce (1994), Brockington (1995), Buist (1995; 1996a; 1996b, 1998), Gruen (1993) and Raphael-Leff (1991). Indeed, clinicians increasingly report they are making attempts to include the woman's partner in assessment and management (Watts & Pope, 1998). Reasons abound for inclusion of partners in the treatment of PND. To recap, the importance of a confiding relationship appears paramount. Difficulties within the family may exacerbate PND. Indeed, marital disharmony and lack of partner support is well recognized as one of the most frequently cited nonbiological factors for development of postnatal depression (Elliot et al., 1989; Morgan, Matthey, Barnett & Richardson, 1997; O'Hara, 1995; Webster, Thompson, Mitchell & Werry, 1994). This was well illustrated by women asked to rank their top 6 reasons for their depression. 'Feeling unsupported' was the top reason (Morgan et al., 1997). Relationship issues can be causal, secondary or
maintaining factors in PND, hence the importance of inclusion of men in treatment (Buist, 1996a).

Even relationships that are strong and healthy to begin with are strained by the adjustment to parenting process, even more so when PND develops. Whiffen and Gottlib (1993) suggest that intervention needs to be focused at assisting women to adjust to difficulties in the maternal role or their relationship with their partner. They strongly recommend that standard treatment be focused on relationship issues; given the consistent finding that relationship difficulties increase vulnerability for PND. Reinforcing the marital relationship at this time may help counteract both the reoccurrence of depression and martial breakdown later on.

Women with PND are in particular need of emotional and instrumental support from their partners. Disparity between the woman's needs and the priority of care given to them by their partners may contribute to both the severity and duration of their illness (Morgan et al., 1997). Including men in treatment increases their level of understanding about PND, thus potentially increasing their empathy, their confidence and their skills in supporting their partners, making offers of support more likely (Kowalski & Roberts, 2000; Morgan, et al., 1997). Psychologically vulnerable women who believe they are appreciated and supported by their partner have been found to have improvements in mood, reductions in stress levels, and be less likely to relapse with psychological illness (Marks, Wieck, Checkley & Kumar, 1996).

Relationship factors are not an issue for all couples. Other sociocultural factors, such as social isolation, lack of social support, financial difficulties, recent life stresses, and difficult birth experiences, may also contribute to the stress on families in the postnatal period. Because the male partner exists within this system that is under strain, it would be sensible to buffer his resources and increase his understanding also.

Another good reason for increased research and treatment inclusion of male partners is that many men are more vulnerable when spousal support is decreased. This decrease often occurs postnatally, and because men have a far narrower base of support network than women do, they are at increased risk (Barnett, 1992; Brockington, 1995).
Increasing the resilience of the male partner to stress and depression is paramount for three reasons. Firstly, the evidence points to increased rates of depression for men whose partners have PND (Ballard et al., 1994; Harvey & McGrath, 1988; Lovestone & Kumar, 1993). Secondly, not only does this significantly impair his life, but it also means that both parents are less available for the infant and other children. Lastly being depressed makes it less likely that the male partner is able to provide needed support for his spouse.

Including men in treatment not only raises their awareness of PND, but also potentially has a flow-on effect to their peers and the wider community, leading to a general breakdown of stigma regarding mental illness in the wider community (Kowalski & Roberts, 2000).

For these reasons, comprehensive care must extend beyond the individual woman to include her family system. Timely interventions can elucidate the nature of the PND, identify causative factors and use the therapeutic window to alleviate distress and strengthen the couples' relationship and, therefore, the family bond.

Including partners' in treatment requires some differences in approach and practices (Brockington, 1995; Buist, 1996a; Morgan et al., 1997). Various considerations need to be made to increase appropriateness of interventions with men. Some of these considerations include: their unavailability during working hours and their reluctance to participate in what is seen as 'women's' business. Other possible factors may be shame and embarrassment in acknowledging problems, particularly in the postnatal period when parents are supposed to be 'blissful' and blame of self or partner for the unexpected problems that are being encountered. In practice, some professionals are loathe to include partners because it adds to their work load, and means working out of hours. Others, are wary about aggravating issues within an already strained system.

In designing treatment interventions, the different coping and communication styles of men and women need to be considered. Men tend to be solution focused, attempting to fix things, whilst women tend to be more emotion and empathy focused, seeking to be listened to and understood (Barrows, 1999; Biddulph, 1996; Edgar, 1997; Gray, 1993).
Including partners in treatment provides an opportunity to give accurate information and explore expectations about parenting. The practicalities of who is providing instrumental and emotional support can be addressed, leading to increased understanding of the changes having a baby and depression bring to the couple’s relationship.

1.12.8 RESEARCH ON EFFICACY OF TREATMENT WITH PARTNERS

An enormous gap exists in the research literature documenting interventions that include both partners in the treatment of postnatal depression.

Gruen (1993) broadly describes a 6-12 month group treatment programme for women with PND that includes monthly couples’ meetings. Within this group programme the symptoms of depression, anxiety, low self-esteem, lifestress and poor interpersonal relationships were addressed. Components of education and information, stress reduction, cognitive restructuring, development of support systems, anger management and grief work were used. The couples’ work aims to increase understanding, coping skills and a sense of inclusion for the spouses. Gruen (1993) reports this model is divided into three phases of treatment, each of 2-3 months duration. However, no information is provided regarding the target group, or recruitment, the numbers participating, who conducted the intervention, the assessment process or ongoing measurement or outcome evaluation.

Kowalski and Roberts (2000) present a discussion of a treatment program they are running for PND in the United Kingdom. A 10-week, closed support group for women who score above 12 on the EPDS has been running since 1998. Consistent feedback from the women in the group revealed a desire and need for some intervention for their partners. Kowalski and Roberts (2000) trialled a one off, 2-hour session for 5 men, who were in relationships with women currently in the PND group. This unstructured open discussion forum led to 2 further unstructured forums being scheduled, three and four weeks apart respectively.

Unfortunately, no treatment outcomes measures are reported for either the women's or the men's group. Thus, the efficacy of the intervention is unknown. However, feedback from the participants is summarized. The women were reported to feel more optimistic about their relationships and their own recovery. They reported improved communication and delight in the support demonstrated by their partner in attending the men's group. The men are
reported to have found relief in sharing their experiences with other men, in addition to increased awareness of their partner's emotional needs and how best to offer support. This reported feedback looks very promising, however empirical studies will be needed to provide the level of evidence required to draw conclusions.

A wide search of the literature revealed two empirical studies that have included partners in some part of the treatment for PND. This inclusion is by no means extensive, in terms of level of intervention offered, but the results are promising.

Morgan et al. (1997) conducted an uncontrolled study of an eight-session group programme for women (n=34) described as postnatally 'distressed'. The programme included one session for couples (n=20), who were approached directly to participate. The women’s programme focused on myths about motherhood, information regarding PND, relationship issues, expectations about self, information regarding mother/infant attachment and included cognitive behavioural exercises. Not enough information is given about the structure of the programme to assess how integral the cognitive behavioural model was to the programme. The couples’ evening is described as split into two halves. The men and women together for the first hour discussing their experiences, and then separate discussions are conducted for the remainder of the 2-hour session. Formal diagnosis did not occur for any of the women in this study, therefore, reducing the internal validity of the study. But, several themes are reported from the content of the discussion within the groups. These included: the differences in the reality of motherhood in comparison to expectations, lack of self-care women engage in, the surfacing of unresolved childhood issues, escalating communication problems with spouses, men willing to offer instrumental support but being rejected by spouse resulting in frustration and men not knowing how to provide appropriate emotional support.

Measures of depression, self esteem and general health were taken before, after intervention and at 3 months follow-up. Relationship measures were not taken, nor were measures of men's depression levels. Measures of general health were taken for only 14 of the 20 men who participated. Morgan et al.'s (1997) group intervention was successful for the women, results indicated significant increases in mood, self-esteem and general health for participants. No significant differences were found between women whose partners
attended the couples evening and those who didn't, although improvements in self esteem measures were found for the women whose partner attended. Qualitative reports suggested that the relationships of those who both participated in the programme had improved but no formal measurement occurred. In fact, given that the presenting problems took at least several months to develop, it is surprising that any change was found after one 2-hour session.

This success is tempered by methodological problems existing with this study. The participants in this study were referred from mother and baby units in Sydney, Australia. Reflective of the multicultural region, 50 percent of this group had one or both partners coming from a non-English speaking background, and for six of the couples this was true for both partners. This reduces the generalizability of these findings to similar samples. No information is provided regarding the socioeconomic backgrounds of participants; it may be that like many immigrants, this also separates them from the population as a whole.

The major problems identified with this study, however are treatment confounds in operation and the lack of control group. Seventeen of this sample was also being seen for individual psychotherapy during the group programme. Twenty-seven of the sample had undergone a residential programme between 1 and 4 weeks prior to beginning the group programme. Thus, it may be that this programme gave the women a 'head' start before beginning the group. A lack of consistent intervention is described in the couples' evening. Morgan et al. (1997) describe having to show a video of a woman with PND to open up discussions, which were proving stilted. Thus, it is difficult to attribute the gains reported to the group intervention. A host of other factors may have contributed, including time, individual psychotherapy and gains from prior treatment taking effect.

Many of these methodological issues are addressed in a well-designed study by Misri, Kostaras, Fox and Kostaras (2000) who found inclusion of partners to have a measurable effect on women with PND. Misri, Kostaras, Fox and Kostaras (2000) randomly assigned women with PND recruited from major university hospitals in British Columbia to either patient's only intervention (n=13) or patients and their partners (n=16). The patients in both groups were seen for 7 psychoeducational home visits. This consisted of 6 visits, with visit 7 at one-month follow-up. Within the visits, mood was assessed and medication reviewed.
In group 2, partners were involved in 4 of the 7 visits, discussion centered on postpartum issues such as need for instrumental and emotional support. Women were assessed for depression, distress and well being, martial satisfaction, and parental behaviour using well recognized measures. Men completed marital satisfaction and mental health measures.

Relative to the control group, women in the intervention (partners involved) significantly decreased depressive symptoms post treatment. Women whose partners were not involved showed significant decreases in marital satisfaction at posttest. Those whose partners were involved showed a slight, non-significant improvement. For the men, those who were involved in the intervention obtained significant improvement in their health, but in both groups their martial satisfaction decreased. It may be that for men, the amount of intervention they received was enough to highlight problems, but not look at solutions. These results held up at the one-month follow-up. Patients whose partners were involved, showed greater improvement in mood, relationship satisfaction and general health than patient-only intervention. Relative to the support group, general health of partners in the women-only intervention deteriorated. This study indicates that, as expected, partner support through inclusion in treatment has a measurable positive impact on women with PND. Women whose partners are included, show more rapid recovery and improvements in relationship perception. In contrast, partners who are not involved, show deteriorations in their health.

1.12.9 PROBLEMS WITH THE PSYCHOLOGICAL TREATMENT RESEARCH

In sum, preliminary psychotherapeutic treatment for women with PND has proved reasonably promising in studies to date. Particularly, structured group treatment and treatment that takes a family perspective provide hope for good recovery.

However, several problems with previous research in the area of psychotherapeutic treatment for PND need to be addressed. Firstly, a dearth of published treatment efficacy literature exists on PND as a whole. Minimal interventions have been attempted that include men, despite the obvious importance of involving the entire family system in treatment (Misri, Kostaras, Fox & Kostaras, 2000; Morgan et al., 1997).
Some of the research that has been conducted has lacked formal diagnosis of PND or has used measures with questionable validity/reliability, hence making it impossible to ascertain what has actually been measured, and what construct the intervention applied has manipulated (Boath et al., 1999; Fleming et al., 1992; Gruen, 1993; Kowalski & Roberts, 2000; Morgan et al., 1997; Rowe et al., 1996).

Another difficulty is the lack of standardized intervention or failure to explain exactly what was done in the intervention, making it difficult to unravel what the important treatment variables are or to replicate the study (Boath et al., 1999; Cooper & Murray, 1997; Fleming et al., 1992; Gelfand et al., 1996; Misri, Kostaras, Fox and Kostaras, 2000; Rowe et al., 1996). It is important the treatment reflects or represents a reasonable approximation of the treatment of interest; which is why detailed description of the intervention or treatment manuals are recommended (Kazdin, 1994). Variation from the treatment of interest introduces threats to both construct and external validity.

Coupled with this is the fact that interventions have been conducted by workers with minimal training. Thus, the integrity and reliability of the treatment delivered is questionable (Appleby et al., 1997; Holden et al., 1989; Morgan et al., 1997; Wickberg & Hwang, 1996). This can be avoided by employing experienced therapists and having co-therapists meet regularly to reduce drift (Kazdin, 1994).

Often many therapists have been involved in delivering the intervention, introducing a large number of therapist variables, and thus increasing the complexity of the possible effective variables. That is, it may be particular characteristics of the therapists causing the effect on the subjects in the study, rather than the intervention per se (Holden et al., 1989; Morgan et al., 1997; Rowe et al., 1996). Therapist variables include factors such as age, gender, skills, professional experience, personality and therapist warmth (Kazdin, 1994). This can only be controlled by standardizing therapeutic input, that is, having the same therapists conduct different treatments.

Small sample sizes have been used in studies, reducing the power of the research and the ability to generalize results obtained (Meager & Milgrom, 1996; Misri, Kostaras, Fox & Kostaras, 2000; Wickberg & Hwang, 1996). Some studies lack control groups, therefore
jeopardizing both the validity and reliability of the findings (Gruen, 1993; Morgan et al., 1997; Rowe et al., 1996; Stuart & O'Hara, 1995; Wisner et al., 1999). Other studies have had substantial attrition rates (Appleby et al., 1997). Lack of matching of important confounding variables, such as medication, marital status, level of social support, previous history of depression, has also occurred (Fleming et al., 1992; Rowe et al., 1996; Wickberg & Hwang, 1996).

In addition, short follow up periods have been used, raising the question of whether treatment effects were sustained over time (Appleby et al., 1997; Holden et al., 1989; Misri, Kostaras, Fox & Kostaras, 2000; Wickberg & Hwang, 1996). This is particularly important as research has indicated that a lag time may exist for development of depression in men (Lovestone & Kumar, 1993; Marks, Wieck & Seymour, 1992).

Finally, a broad problem with research in this area is that there is almost no systematic work on programme evaluation, as discussed in the following section.

**1.12.10 PROGRAMME EVALUATION IN PND TREATMENT**

In making recommendations for service evaluation of health services for PND, Oates (1994b) reinforces the importance of obtaining consumer satisfaction data from the client and the referrer, as well as quantitative measures of treatment outcome.

This seems eminently sensible given the documented difficulty in non-presentation and poor participation in treatment for PND and the importance of timely intervention for reduction of long-term dysfunction. Surely, researchers and clinicians alike would be keen to ascertain participants' views on treatments offered. However, cursory attention has been paid to measurement of participants' views. The research literature contains very few examples of intervention programmes that have obtained any measurement of participants' programme evaluation beyond changes in presenting symptoms. Certainly, no studies were found that obtained any measure of referrer's evaluation or satisfaction with the treatment programme to which they had referred their client.

Five intervention studies have included some form of client evaluation of the intervention they received. Two of these studies are examples of primary intervention. Gillieat, Ferroni
and Moore (2000) obtained mother's views in their qualitative study of 19 first time mothers who participated in six postnatal parenting information sessions conducted by child health nurses. These women were interviewed regarding why they participated and the effects of their participation in the parenting programme. This study could be best described as a health promotion intervention. These women were not depressed, nor identified as being of high risk of PND.

Webster, Linnane, Dibley et al., (1997) conducted a screening assessment using the EPDS and provided written information on PND to 41 antenatal women at their first prenatal visit. Women completed a self-report questionnaire on the screening process and the usefulness of the information provided. The staff involved in the screening process were also interviewed regarding the advantages and disadvantages of the screening process, how this affected the clients, and themselves and what changes they had noticed in their workload. This is the only study to involve staff in intervention evaluation. However, details of how long the interviews were, who conducted them and what specific questions both the interview and the questionnaire contained are not provided.

Three studies that conducted intervention programmes for postnatally depressed women attempted to survey their views regarding the treatment they received.

Morgan et al. (1997) in their group intervention that consisted of an 8-week CBT programme for women and a 2-hour session for their partners, ascertained participant's views of the programme through questionnaire feedback. No details were provided about the content of the questionnaire's items.

Again, Kowalski and Roberts (2000) report obtaining participants' views on the intervention they received by evaluation form, but no details of what the form consisted of are documented.

Finally, in the most comprehensively documented study to date, Fairchild (1995) conducted a telephone survey to assess level of satisfaction with the unstructured support group programme they ran over an 18-month period. The survey consisted of 12 basic questions. Ten questions used a five-point Likert scale and focused on participants' satisfaction with
the group, perception of support, information, help obtained, level of comfort in the group and whether she would recommend the group to others. Two open-ended questions were asked regarding what she liked best and least about the group. A 96% (n=26) response rate was obtained.

If we are going to encourage women and their partners to seek and participate in treatment for PND, we need to know not only what interventions work best for whom, but also whether the intervention is palatable to participants. We can only accurately assess this by asking for feedback. The current study attempted to address the gaps in the literature on evaluation of treatments for PND. This occurred through use of both quantitative and qualitative outcome measures, obtained from an array of sources.

1.13 SUMMARY AND RATIONALE
Under the best circumstances caring for a new baby can be stressful. Learning to function on less sleep, coping with a changed body, increased demands, changes in relationships, reconciling the conflict of new and old roles of being a mother, daughter, lover, worker are challenging tasks. For mothers and their families who are suffering depression these tasks become insurmountable (Buist, 1996a; 1998; Nicolson, 1998; Sherr, 1995).

PND is one of three postnatal mood disorders that affects up to 20% of all mothers (O'Hara et al., 1984; O'Hara, Schelte, Lewis & Varner, 1991; O'Hara & Swain, 1996; Romito, 1989). It is now well recognized that PND is a serious problem that disrupts the lives of not only mothers, but also optimal child development and marital and family harmony (Ballard et al., 1994; Boyce, 1994; Brockington, 1995; Campbell & Cohn, 1996; Cichetti et al., 1998; Meager & Milgrom, 1996; Morgan et al., 1997; Murray, Hipwell, Stein et al., 1996; Murray, Fiori-Cowley, Hooper et al., 1996; Murray & Cooper, 1997b; O'Hara, 1995; Webster et al., 1994).

In view of the prevalence of PND, the potential effect on the family and the clear contributing role of social influences, it is surprising that research into treatment is sparse. Treatments that have been conducted have grown out of the various aetiological models and theories to explain PND. Biological, psychological, social and cultural factors have all received attention from researchers in trying to unravel the causative factors (Gotlib et al.,

Biological theories rely on the hormonal and endocrine changes that occur during the postnatal period (Harris et al., 1989; Joffe & Cohen, 1998; O'Hara, 1995; Steiner, 1998; Wisner & Stowe, 1997). Psychological, life stress and social theories consider the individual vulnerabilities of each parent and the additional strain they are placed under adjusting to new demands of parenthood (Buist, 1996a; Boyce, 1994; Cox, 1986; Jebbali, 1993; Kumar, 1994; Nicolson, 1998; O'Hara, Schelte, Lewis & Varner, 1991; O'Hara, 1995; Thurtle, 1995).

Mothers more likely to experience PND are those who have a poor relationship with their spouse, those who lack support, have a personal or family history of psychological problems, and who report high levels of stressful events (Bernazzini et al., 1997; Buist, 1996a; 1998; Buist & Barnett, 1995; Cutrona, 1983; Hannah et al., 1992; Nielson-Forman, et al., 2000; O'Hara & Zekoski, 1988; O'Hara, Schelte, Lewis & Varner, 1991; O'Hara, Schelte, Lewis & Wright, 1991; Paykel et al., 1980; Whiffen & Gotlib, 1993; ). A number of cognitive and behavioural characteristics such as isolation and poor social skills, insufficient self-reward, excessive self-punishment and unrealistic expectations have been identified (Boyce et al., 1991; Lewinsohn et al., 1979; Matthey et al., 2000; O'Hara, Rehm & Campbell, 1982; Whiffen, 1988).

These findings are consistent with Beck's Cognitive Model of Depression (Beck et al., 1979), which suggests that stresses like childbirth, trigger specific dysfunctional patterns of thinking in individuals predisposed to depression. Not surprisingly, PND negatively affects the mother's self-perception and worldview, as well as having substantial adverse consequences for all members of the family.

Although progress has been made on the aetiological and risk factors, many questions are left unanswered. Very limited research has been conducted on treatment, whether it is pharmacological or psychotherapeutic. The most effective treatment strategy is unclear. Intervention including fathers is a concept that has been almost universally recommended, but rarely adopted in the published literature. What is needed are well designed and
acceptable treatment programmes that include spouses and attempt to answer whether this inclusion makes any difference to recovery and maintenance of recovery from PND.

Thus, the need to address both the absence of research into the efficacy of treatment for women with postnatal depression and their partners appears paramount for optimal family outcome. Secondly, the flaws described above in the research that has been conducted to date need to be remedied. Finally, the current study aims to add to evaluate the treatment programme that is delivered.

### 1.14 AIMS
More specifically, the project aims to:

1. Reduce symptoms of postnatal depression in mothers participating in this study.
2. Compare the effectiveness of CBT group treatment with individual treatment for mothers diagnosed with PND, and a control support group.
3. To investigate the prevalence of paternal depression in this sample and to reduce symptoms of depression experienced by fathers involved in the treatment.
4. To compare mother's only treatment with treatment involving both the mothers and the fathers in reducing levels of PND.
5. To improve reported quality of marital/de facto relationship satisfaction within the subgroup where mothers and fathers participate in treatment.
6. To improve and compare parenting stress between the various treatment groups.
7. To improve and compare the changes in levels of social support between the various treatment groups.
8. To obtain participants' qualitative views on the efficacy of the interventions in which they participated.
9. To obtain referrers' views on the efficacy of the interventions offered to their clients.

### 1.15 HYPOTHESES
It was hypothesized that:

1. Women involved in the treatment interventions will have significantly lower levels of depression, anxiety and stress, and higher levels of relationship satisfaction and social support at posttest, when compared to controls.
2. Women receiving the group interventions will perform significantly better on all measures at posttest and follow-up, than women receiving the individual intervention.

3. Women whose partners are involved in treatment will have significantly lower levels of depression, anxiety and stress, and higher levels of relationship satisfaction and social support than women in other conditions at posttest and follow-up.

4. Men who received the intervention will have lower levels of depression and stress and higher levels of relationship satisfaction and social support than men who acted as controls at posttest and follow-up.
CHAPTER 2

ASSESSMENT ISSUES

OVERVIEW
This chapter presents the assessment tools used in this research. A rationale is provided their selection, along with some of the major challenges of assessment in this area.

2.1 ASSESSMENT OF PND
The first step in treatment of PND is accurate identification of women suffering with the disorder (Glasser, Barell, Boyko et al., 2000; NHMRC, 2000; Spinelli, 1999).

Generally, a good assessment obtains a complete psychosocial and medical history. This includes personal and family history, physical and mental health, risk and protective factors, social circumstances, social support, relationship issues and current stressors (Kowalenko et al., 2000).

With this particular client group, it is also important to obtain information not usually gathered, such as information about the pregnancy, whether it was planned and the circumstances surrounding it, the physical and emotional health of the mother during the pregnancy and the labour and delivery process, the expectations surrounding the birth and the day to day current level of functioning. This information builds a more complete picture of the various individual risk and resilience factors that need to be considered.

Commonly, clinical assessment occurs either by interview or administration of an assessment instrument, or both. The assumption made with interviews or instruments is that subjects have the capacity to recognize emotional states and problems, and are willingness to acknowledge these (Matthey et al., 1997). Thus both measures can show good reliability but, potentially, neither is valid. This is a fundamental consideration in assessment of the postnatal population who are notorious for non-presentation and
underreporting (Buist, 1995; Hearn et al., 1998; Pope, 1995; Pope & Watts, 1996; Robinson & Young, 1982; Whitton et al., 1996)

Routine screening of women in the postnatal period may identify those at risk of PND. Screening tests are not diagnostic, but indicate probable disease. Suspected cases then require a clinical assessment to confirm clinical status before treatment can be offered. To be practicable, screening tests should be easily administered and of short duration (Robinson & Young, 1982).

In terms of method of administration, ideally, screening for postnatal disorders should take place as part of ongoing postnatal care and thus be conducted during face-to-face interviews. In general, methods of administration such as postal surveys have an unsatisfactory return rate, particularly with depressed populations whose non return rate has been found to be twice as high as non depressed subjects, suggesting that those most in need would be less likely to be detected by postal screening (Clarke & Williams, 1979).

Assessment tools are useful because it seems apparent that PND is often not detected in routine clinical examination (Johanson, Chapman, Murray, Johnson & Cox, 2000). Many cases are liable to be missed at 6-week check up by not utilizing screening tools. Evins, Theofrastous and Galvin (2000) found that if left up to routine clinical evaluation by physicians only 6.3% of cases of PND were detected in a sample of 391 patients, whilst 35.4% were detected through screening with the EPDS (Cox et al., 1987).

An important consideration in selection of measures for PND is that some measures of general depression may not be suitable for measurement in the postnatal period because of the increased physiological changes that accompany pregnancy, childbirth and the postnatal period (Cox et al., 1987; Hopkins et al., 1989; O'Hara et al., 1984). Difficulties such as sleep disturbance, appetite change, lowered libido and decreased energy levels are often present during this period of time, regardless of whether a woman is depressed. Obviously, these issues are often magnified with depression and will occur beyond what is considered normal disruption.
Measures of PND have been extremely varied in terms of method of assessment, cut off scores and times when measurements are taken. This has contributed to the lack of consensus regarding the definition and classification of postnatal depression (Najman et al., 2000; Whiffen, 1991; 1992; Wisner, et al., 1999).

2.2 METHODOLOGICAL ISSUES IN ASSESSMENT
Like much of the research into PND there are some common methodological issues that need to be considered in evaluating the usefulness and applicability of various assessment measures.

Many studies testing the usefulness of instruments fail to use control groups or use inadequately matched control groups (Whiffen & Gottlib, 1993). This makes comparisons between the groups difficult and introduces other possible causative factors. Some studies have asked participants to nominate friends without children and used them as control groups, introducing appreciable problems with lifestyle comparability. Others have used women who have older children, who obviously have different child care responsibilities to mothers of newborns (Cutrona & Troutman, 1986; O'Hara et al., 1990).

Many studies have been conducted using small sample sizes, which increases the measurement error and reduces the ability to draw firm conclusions about the applicability of the instrument. Small sample sizes are mostly due to difficulties in recruiting a large enough or representative sample of women. This is most likely because of the same factors involved in not seeking help, i.e. lack of information about what PND is, lack of self-awareness, lack of accurate assessment by health professionals, reluctance to accept treatment etc. (Buist, 1995; Gunn et al., 1998; McIntosh, 1993; Pope, 1995; Pope & Watts, 1996; Robinson & Young, 1982).

Appleby and Whitton (1993) make several recommendations regarding improving recruitment of women with PND for research. They suggest approaching in person, not by phone or mail, approaching when the women are not depressed, i.e. approaching early in pregnancy, and being flexible in assessment times and venues, for example, visiting mothers in their homes.
Sample bias is likely to be introduced by women who decline participation in these studies. Often studies do not report detailed descriptions of the women who drop out of the study. It may be that these women are more or less depressed that those who remain, hence producing unrepresentative data and reducing its generalizability (Anastasi, 1988; Condon & Corkingdale, 1987).

The populations from which subjects are drawn can be unrepresentative of women with PND as a whole. For example, using only married women or primiparous women or women from one socioeconomic or ethnic group limits the ability to generalize the results to the rest of the population of child-bearing women (NHMRC, 2000).

Lastly, often out of ease and or practicability, researchers use samples from one particular service. This has the potential to introduce variables specific to that sample. For example, if the hospital is private, the sample will be more likely to have less financial difficulties, a higher standard of living and have higher levels of education than those attending a public hospital; again making it difficult to generalize the results to other groups (Stamp et al., 1996).

2.3 ASSESSMENT METHODS
Currently there are four commonly adopted approaches to assessment of postnatal depression, full clinical interview with a psychiatrist or a psychologist, structured clinical interviews, self report questionnaires or clinician rating scales (Harris, Huckle, Thomas, Johns & Fung, 1989). These approaches will be reviewed in order to illustrate the rationale adopted in selection of assessment methods for the present study.

2.4 SELF-REPORT SCALES
Research into stress, coping and depression in pregnancy and postpartum often relies on self-report measures (Ayers, 2001). Both strengths and weaknesses exist for self-report rating measures.

In terms of strengths, self-report measures are favoured because they are relatively simple, inexpensive and easy to use. Administration requires minimal time and or training. Often they can be used by health care workers as they do not carry the restricted use by
psychologists/psychiatrists that many other measurement tools do (Lee, Yip, Chiu & Chung, 1999).

Self report scales have been criticized due to poor concordance often found between expert and self rating scales designed to measure the same syndrome e.g. depression. Regardless of whether self-rated or expert-rated, such scales are often based on different conceptualizations of the syndrome in question (Mattila-Evenden, Svanborg, Gustavsson & Asberg, 1996). Senra (1996) suggests additional reasons for poor concordance could be due to scale differences between self report and interview scales, or a difference in viewpoint between the patient and the clinician rating them or a combination of both, or scales being chosen arbitrarily and used for tasks for which they are not intended.

Schade, Jones & Wittlin (1998) conducted a 10-year review of the accuracy and usefulness of depression measurement tools. In keeping with earlier views expressed above, the reviewers suggest that some depression measures are measuring depression and anxiety symptoms, as well as other non-specific distress factors. Thus, a crossover of constructs are at times being measured by self report. However, on the whole, well validated measures such as the BDI and EPDS are able to accurately detect depression in the general population.

Marachi, McMahon, Spieker and Munson (1999) in a review of self-rating scales used to measure depression state that the problem of low scores (or high false negative rates) in the measurement of depression in mothers is particularly important to consider because of an observed incongruence between scores on self report scales and observed behaviour. This tendency is considered to be a reflection of women's reluctance to express any negative feelings associated with a culturally defined positive event (Cox, 1983; Whiffen, 1992).

Another drawback of self-rating scales include where to insert cut-off points and miscalculation with use of cut-off points (Robinson & Young, 1982). To achieve high sensitivity (i.e. a low false negative rate) a lower cut-off score is usually chosen, which compromises the predictive value of a screening scale (Lee et al., 1999).
To complicate the issue of accurate detection, some clients who are in recent crisis score as positives but do not actually have sufficient duration or number of symptoms to receive a diagnosis of an ongoing illness. Thus they are false positives.

Condon and Corkingdale (1997) warn that face and content validity are important issues that often take a back seat in instrument construction. Careful perusal of item content of scales is essential before selection for use. The authors also caution against use of a single self-report measure to determine caseness of PND. They suggest erring on the side of conservatism in determining a cut-off score for caseness and they recommend using self-report measures in a two-stage process, where clinical interview is also conducted.

In summary, self-report scales need to be selected carefully and cannot be used to make a diagnosis, however they are useful in determining who needs to be referred on for future interview assessment.

Many self-report measures have been used in the study of PND. These include the EPDS(Cox et al., 1987), the Beck Depression Inventory (BDI, Beck, Ward, Mendelson, Mock & Erbaugh, 1961, Beck, Shaw, Rush & Emery, 1979), the General Health Questionnaire (GHQ; Goldberg, 1972), the Zung Self rating Depression Scale (Zung, 1965), the Centre for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977), the Depression Adjective Checklist (DACL; Lubin, 1981), the Profile of Mood States-Depression Subscale (POMS-D; McNair, Loor & Droppleman, 1981), the Symptoms Checklist and brief Symptom Checklist (SCL-90R; Derogatis & Spencer, 1983), the Hospital Anxiety and Depression Scale (HAD; Zigmond & Snaith, 1983), the Pitt Depression Scale (Pitt, 1968) and the Raskin Three Area Rating Scale for Depression (Raskin, Schulterbrandt & Reating, 1967).

Measures selected for use in this study needed to fit a number of criteria. Firstly, the instrument needed to be able to demonstrate acceptable reliability and validity standards when reviewed by not only the authors but also by external reviewers. This meant that the tool needed to be reasonably well known and have published information on its psychometric properties.
Secondly, because several issues were of interest in helping to illustrate the entire picture of PND in this study, this meant participants were asked to fill out several measures, several times. Thus, the instruments needed to be relatively brief. This issue was even more important when considering the characteristics of the participants in this study. Firstly, the women were depressed, hence possibly suffering with low motivation and poor concentration, and secondly, we were asking men who traditionally have been seen as non participants to participate and fill out measures.

The EPDS (Cox et al., 1987) and the BDI (Beck et al., 1961) the two most widely used and reported self-report scales, will be discussed here because they have been chosen for use in this study.

2.4.1 THE EDINBURGH POSTNATAL DEPRESSION SCALE

The EPDS is a 10-item self-rating depression scale developed by Cox et al. (1987) to detect postnatal depression (see appendix 4). The scale was originally developed because of problems encountered by use of the BDI (Beck et al., 1961), the Hamilton Depression Rating Scale (Hamilton, 1967) the Pitt (Pitt, 1968), the Zung (Zung, 1965) and the General Health Questionnaire (Goldberg, 1972) during the postpartum period (Cox et al., 1987; O'Hara et al., 1984; Whiffen, 1988).

Cox and colleagues recommended the EPDS because it does not include the somatic symptoms of depression which are common to many women in the postpartum period and are not necessarily indicative of depression (Cox et al., 1987). Within PND, anxiety symptoms commonly coexist, and the EPDS reflects this with items specifically addressing anxiety symptoms.

The EPDS takes only a few minutes to complete, and is administered as a paper and pencil test. It is acceptable to subjects and there is evidence it is a good screening measure both postnatally and antenatally (Pop, Kompore & van Son, 1992). It is easy to administer and score, and avoids assessing normal postpartum issues as symptoms of depression. The items are scored from 0-3 in terms of severity, giving a total score ranging from 0-30.
An additional advantage of the EPDS is that administering the scales gives women an opportunity to talk about the difficulties and problems they are experiencing, thus providing an opportunity for education and discussion of treatment options.

2.4.1.1 THE DEVELOPMENT OF THE EPDS

Cox (1986) assessed a number of depression rating scales, choosing 21 items for possible inclusion, and pilot tested these with 100 British women from health centres. This led to a scale of 13 items, which was originally validated with a sample of 63 postnatal women who were tested with the EPDS, the Standardized Psychiatric Interview (SPI; Goldberg, Cooper, Eastwood & Kedward, 1970) and the Research Diagnostic Criteria (RDC).

The scale was reduced to 10 items and 84 women were tested at about 13 weeks postpartum. The women were administered the EPDS and the Standardized Psychiatric Interview (SPI; Goldberg et al., 1970) to obtain a Research Diagnostic Criteria diagnosis for major depression.

Using a threshold of 12.5 Cox et al. (1987) correctly identified all women with RDC major depression and reported a sensitivity (percentage of true cases identified) of 86% in a small non random sample, a specificity (percentage of true non cases identified) of 78%, and a positive predictive value (the percentage of all those tested as positive who were correctly identified as such) of 73%.

Harris et al. (1989) achieved the best documented EPDS validity levels using a score of 12 with a sensitivity of 95%, a specificity of 93% and a positive predictive value of 75%, but again their sample was not randomly selected and included women who had a diagnosed thyroid dysfunction which is a known risk factor for depression (Harris, 1993).

Murray and Carrothers (1990) screened a large sample of randomly chosen postpartum British women and found a sensitivity of 95.7% and specificity of 81.1% and a positive predictive value of 43%, using a cut off of 12.5.

Australian researchers have also conducted validation studies using the EPDS. Boyce et al. (1993) recruited 103 women from baby health clinics in Sydney up to 6 months
postpartum. At a cut off score of 12.5 a sensitivity of 100% was reached, with 95.7% specificity and positive predictive value of 69.2%. The EPDS was highly correlated with the GHQ (Goldberg, 1972) and the Pitt Scale (Pitt, 1968) offering evidence of concurrent validity. This study's limitations were the small sample size, the non-representational sample and cross sectional design.

Astbury et al. (1994) in their study of 790 Victorian women obtained a positive predictive value of 97.6% at a cut off of 13. Factor analysis of the EPDS with this sample obtained alpha coefficients of 0.97.

It appears that the optimal score of 12.5 has now been confirmed in several studies. The use of different cut-off score has considerable impact on sensitivity, specificity and the scales' positive predictive value. For clinical and screening purposes, clinicians prefer to err on the side of caution and would prefer to obtain more false positives than false negatives and so will lower the cut-off score for further investigation. A score of 10 has been used previously for this purpose (Cox et al., 1987; Harris et al., 1989).

2.4.1.2 CROSS-CULTURAL VALIDITY OF THE EPDS
The EPDS has been used widely all over the globe and has been translated and validated in Japan (Okano, Nomura, Kumar, Kaneko, Tamaki, Hanafusa, Hayashi & Matsuyama, 1998; Tamaki, Murata & Okano; 1997), Sweden (Wickberg & Hwang,1997), Italy (Benevenuti, Ferrara, Niccolai, Valorini &Cox, 1999), the Netherlands (Pop et al.,1992), New Zealand (Webster, Thompson, Mitchell & Werry, 1994), Canada (Zelkowitz & Milet, 1995), France, China (Lee et al. (1999) and Portugal (Augusto, Kumar, Calheiros, Matos & Figueiredo, 1996), Chile (Jadresic, Araya & Jara, 1995) and with Vietnamese and Arabic populations (Matthey et al., 1997). The EPDS (Cox et al., 1987) has proven to be a valid and reliable instrument in culturally and ethnically diverse populations. Some variation in the most appropriate cut-off score has been established through empirical studies.

2.4.1.3 EPDS COMPARED WITH OTHER SCALES
Thompson, Harris, Lazarus and Richards (1998) using a sample of 1248 women from working class British population were screened antenatally (16 weeks) and postnatally (day 1, and 6-8, 12, 20 and 28 weeks). The original purpose was to determine thyroid antibody
status and then, subsequently, depression, comparing the EPDS, the HAMD (Hamilton Rating Scale for Depression), and the HAD (Hospital Anxiety and Depression Scale) for their ability to identify RDC defined depression over time. An overall concordance of 78.3% was found between the scales. The EPDS had higher sensitivity scores but lower specificity scores in comparison to the HAMD, with the EPDS retaining its efficacy over time. The EPDS was shown to be superior as a screening tool compared with the HAD. A cut-off score on the EPDS of 10/11 was recommended for detection of women with a high probability of PND.

Condon and Corkindale (1997) compared the EPDS, the Hospital Anxiety and Depression Scale, the Zung Self Rating Depression Scale and the Profile of Mood States with a sample of 200 postnatal women tested at 4 weeks, 4 and 8 months postpartum. The correlations between the four scales were fairly consistent ranging from 0.6 - 0.83. The percentage agreement in 'caseness' of depression ranged from 28% to 56% at 4 weeks, improving to 52-72% at 8 months. The EPDS had the best agreement with the Profile of Mood States. Condon and Corkindale (1997) state the percentage agreement of 'caseness' between scales designed to measure the same construct, is poor in the early postnatal period. Correspondingly, this is when the scales are most likely to be used. It is recommended that researchers make a judgment about the face and content validity of instruments and that self-report scales are followed up with clinical interview.

2.4.2 THE BECK DEPRESSION INVENTORY
Over the last 35 years the Beck Depression Inventory (BDI; Beck et al., 1961; Beck, Rush, Shaw & Emery, 1979; Beck & Steer, 1996) has become one of the most widely used self-report measures of depression in both research and clinical arenas for assessing both possibility and severity of depression (Piotrowski & Keller, 1992). In fact, the Thirteenth Mental Measurements Yearbook cites 1026 pieces of research utilizing the BDI (Impara & Plake, 1998). The BDI was based on clinical observation and was constructed to reflect Beck's Cognitive theory of depression. The revised BDI contains 21 items describing symptoms of depression, which are rated from 0-3 in terms of severity. Raters choose the statement that best fits how they felt in the last week. The BDI is scored by summing the total ratings given to each item; scores can range from 0-63. The scale is quick and easy to use, taking no more than 5-10 minutes to complete (Kendell, Chalmers & Platz, 1987). The
scale has good reliability and validity for use with the general population of depressed outpatients (Kendell et al., 1987).

2.4.2.1 USE OF THE BDI WITH PND

Several studies have utilized the BDI with pregnant or postnatal samples. The specificity and sensitivity of the BDI has been called into question because of items measuring somatic symptoms, which are not necessarily indicative of PND (Harris, Huckle, Thomas, Johns & Fung, 1989).

O’Hara et al. (1984) used the BDI, the SADS and the Research Diagnostic Criteria with a sample of 99 American women at nine weeks postpartum. They found that more somatic items were endorsed during pregnancy in this sample and scores dropped from 18.89 during pregnancy to 6.58 during the postpartum period for those diagnosed with depression, according to the RDC criteria. The researchers recommended use of clinical interview as well as BDI for diagnosis of depression in this population.

Hopkins et al. (1989) using a small middle class sample studied 25 depressed and 24 non-depressed women at 6-weeks postpartum, using the SADS and the BDI. A lower cut off score of 7 was used on the BDI. No significant differences were found between depressed and non-depressed women on symptoms of irritability, lack of energy, sleeping difficulties and feeling unattractive, highlighting some of the common changes that occur in the postnatal period that do not necessarily indicate depression.

Harris et al. (1989) assessed 147 postnatal women with the BDI, MADRS, Raskin 3 Area Scale, EPDS and psychiatric interview at six weeks postpartum. The BDI obtained sensitivity rates of 68% and specificity rates of 88%, identifying 13 of the 19 subjects with major depression. Higher than preferred false negative rates occurred. However, this study did not use raters oblivious to the interview results, creating a potential confound.

Whiffen (1988) studied 120 postpartum women to evaluate the convergence of the BDI with the Research Diagnostic Criteria diagnoses of depression. It was found that the BDI demonstrated good specificity (85.9%) but poor sensitively (47.6%), detecting fewer than half of the diagnosed cases. Thus the BDI appears to be too stringent in this population.
Whiffen (1988) attributed this finding to the difficulty the BDI has in detecting minor depression and the possibility that postnatal women tend to downplay their depressive symptomology, considering it 'normal', and so a clinical interview is also recommended for diagnosis.

Regardless of these criticisms, the BDI has been used to measure changes in PND after treatment in several studies (Gelfand et al., 1996; Halonen & Passman, 1985; Meager & Milgrom, 1996; Spinelli, 1997).

More recently, Beck, Steer and Brown (1996) have released the BDI-II, a revised version of the BDI. This has been developed to correspond with the DSM-IV diagnostic system and, accordingly, the time frame for symptom report has been extended to two weeks. Replacement of four items pertaining to weight loss, body image, work difficulty and somatic preoccupation with items pertaining to agitation, worthlessness, and loss of energy and concentration difficulties has occurred. The wording on two items was changed to allow both increase and decrease in appetite and sleep, again making the scale more congruent with symptoms patients who are depressed present with.

These items changes are likely to make the BDI more applicable to postnatal populations because the new items are common symptoms reported by women with PND. These changes were validated in a sample of 500 outpatients who had a range of diagnosed psychological disorders and a college student sample of 120. The cut-off scores for the BDI-II are as follows: 0-13 minimal, 14-19 mild depression, 20-28 moderate depression and 29-63 severe depression.

In terms of diagnostic discrimination, the BDI-II has been found to reliably discriminate between patients with mood disorders and those without. Patients with more serious depressive disorder score higher on the BDI-II than those with less serious depressive disorders (Beck et al., 1996).

Internal consistency coefficient alpha scores for the BDI-II were 0.92 for the outpatient population and 0.93 for the college student population, higher than those obtained for the BDI. Test-retest stability over time was 0.93 (Beck et al., 1996).
In terms of construct validity, the correlation between the BDI and the BDI-II was significant at 0.93. The BDI-II is positively related to both the Beck Hopelessness Scale (Beck & Steer, 1988) (r=.68) and the Scale for Suicidal Ideation (Beck, Kovacs & Weissman, 1979) (r=.37). The correlation with the Beck Anxiety Inventory was .60 (Beck & Steer, 1990) which is not surprising, as depression and anxiety have been found to be correlated in clinical evaluations. The BDI-II was positively correlated with the Hamilton Rating Scale for Depression (Hamilton, 1960) (r=. 71), indicating a robust discriminate validity between depression and anxiety (Beck et al., 1996).

At a cut-off score of 17, the BDI-II obtained a sensitivity of 93% and an 18% false positive rate for the presence of major depression, when diagnosed by the RDC criteria (Beck et al.,1996).

Waller (1998) writes that the BDI-II addresses some of the difficulties noted in the BDI, pertaining to item content and cut-off scores, offers better reliability than the BDI and is a useful screening measure in clinical and non clinical samples with cooperative subjects (Waller, 1998).

The BDI-II (see appendix 5) was selected for use in this study because it has excellent validity and reliability data, it is short, simple and easy to use, it holds substantial currency within the research literature, it has been developed to correspond with the DSM-IV diagnostic criteria for major depression and it provides a check on the depression scores obtained by the EPDS.

2.4.3 Measurement of Anxiety

Symptoms of anxiety syndromes, such as panic attacks, phobias and obsessions and compulsions are recognized as common symptoms of major depression (Fawcett & Kravitz, 1983; Wisner, Peindl, Gigliotti & Hanusa, 1999).

Coryell, Endicott and Winokur (1994) in collaboration with the National institute of Mental Health Program on the Psychobiology of Depression assessed the significance of anxiety symptoms in the context of a primary diagnosis of major depression with 359 subjects.
Over half the sample reported suffering anxiety symptoms and 10% suffered obsessions or compulsions which are less frequently occurring in the general population.

Symptoms of anxiety have long been reported as part of the clinical picture of PND (Buist, 1996b; Buist et al, 1999; Cox, 1986). In fact, items within the EPDS are aimed at investigating symptoms of anxiety. However, anxiety in the postnatal period is not as well studied as PND.

It was considered important to obtain some measure of the extent of anxiety based symptoms within this sample and to determine whether the interventions conducted had any impact on reported anxiety levels. The Beck Anxiety Inventory (Beck & Steer, 1990) was the instrument selected for use (see appendix 6).

2.4.3.1 THE BECK ANXIETY INVENTORY
The Beck Anxiety Inventory (BAI; Beck Epstein, Brown & Steer, 1988; Beck & Steer, 1990) is a 21 item instrument that measures overall severity of anxiety in adults. The items are rated on a four point scale from 0-3, the 21 items range from statements describing 'feeling dizzy or lightheaded' to 'a fear of losing control'. A maximum score of 63 can be obtained. The BAI takes 5 -10 minutes to complete and asks respondents to rate how they felt in the last 7 days. Total scores from 0-9 reflect normal anxiety, 10-18 mild - moderate anxiety, 19-29 moderate to severe anxiety and 30-63 severe anxiety (Beck & Steer, 1990).

The BAI was constructed to measure symptoms of anxiety that are minimally shared with those of depression, such as those measured by the BDI (Beck & Steer, 1990). The BAI obtained correlations of around 0.5 with the BDI. Waller (1996) states that this is not surprising because of high comorbidity rates of depression and anxiety and that anxiety and depression scales frequently correlate between 0.4 and 0.7.

2.4.3.2 THE DEVELOPMENT OF THE BAI
The BAI was developed from 3 earlier self report instruments, the Anxiety Check List (Beck, Steer & Brown, 1985), PDR Checklist (Beck, 1978) and the Situational Anxiety Checklist (Beck, 1982). A large body of published studies within the psychology literature report use
of the BAI. The BAI is recommend for use both as a clinical and research instrument (Dowd, 1996).

The responses of a sample of 810 outpatients who had completed the above 3 measures were used to identify 86 anxiety symptoms. Factor analysis reduced this to 37. Another sample of 160 outpatients was administered the scale and item analysis reduced this down to the existing 21 item scale (Beck & Steer, 1990).

The underlying structure of the BAI has been investigated with cluster analysis and four symptom clusters representing neurophysiological, subjective, panic and autonomic symptoms of anxiety were uncovered (Waller, 1996).

The validity and reliability information available on the BAI proves to be adequate. With a diagnostically mixed sample of 160 outpatients, a high internal consistency of 0.92 was obtained (Beck, Epstein, Brown & Steer, 1988), whilst Fydrich, Dowdall and Chambless, (1990) with a sample of 40 patients with diagnosed anxiety disorders, found a high internal consistency of 0.94.

Test retest reliability of .75 over one week has been reported. The validity data reported is comprehensive including factorial, concurrent, content, construct and discriminant (Dowd, 1996).

The BAI has been used to determine anxiety levels successfully with the postnatal population. Stuart, Couser, Schilder, O'Hara and Gorman (1998), using a community sample of 107 women, measured levels of depression and anxiety at 14 and 30 weeks postpartum using the Beck Depression Inventory, the Beck Anxiety Inventory and the EPDS. The point prevalence of depression was 23.3% at 14 weeks and 18.7% at 30 weeks. The point prevalence of anxiety was 8.7% at 14 weeks and 16.8% at 30 weeks. The BAI detected 11 new cases of anxiety between 14 and 30 weeks postpartum, leading the authors to recommend its usefulness as a screening tool in the postpartum period. The correlation between the BDI and the BAI was $r= .55$ at 14 weeks and $r= .61$ at 30 weeks, highlighting the coexistence of anxiety and depression during this time.
2.4.4 MEASUREMENT OF SOCIAL SUPPORT

In short, social support is a complex construct that has been researched from various angles in the last 20 years (Ayers, 2001; Barrera & Ainlay, 1983; Brown, Andrews & Harris, 1986; Brugha, Sharp, Cooper, Weisender, Britto, Shinkwin, Sherrin & Kirwan, 1998; Caplan, 1979; Coyne and Downey, 1991; Crotty & Kuls, 1985; Stansfield, Fuhrer & Shipley, 1998; Tietjen & Bradley, 1985). In the main, agreement has been reached about the importance of adequate social support in the maintenance of mental health. Mothers in the postnatal period who lack adequate social support have been found to be at higher risk for development of PND (Brugha et al., 1998; Richman, Raskin & Gaines, 1991). There is also some evidence that improving social support will assist in the combating of depression (Brown et al., 1986; Crotty & Kuls, 1985; Stansfield et al., 1998).

In terms of measurement, it becomes apparent that the broadness and variations in definitions in this area inevitability lead to problems in precise measurement and development of instruments (Ayers, 2001). Measures that reflect changes in the individual's perception of both the changes in and the adequacy of their social support are needed.

2.4.4.1 SOCIAL SUPPORT NETWORK INVENTORY

Traditionally, social support is measured either through interview or through structured self-report questionnaires. Interviews, although thorough, are time consuming for both subjects and researcher.

The ideal instrument should measure aspects of network structure and functional content and quality of social relationships (Stansfield & Marmott, 1992). Surprisingly, despite the acknowledged importance of social support in the development of depression, review of the instruments available reveals a lack of standardized instruments available for quantitative assessment of social support.

One such instrument is the Social Support Network Inventory (SSNI) developed by Flaherty, Gaviria and Pathak (1983). The purpose of this self-report instrument is to assess the structure of and interaction among the respondent's social support network, that is, perceived instrumental and emotional support. The instrument has been developed to tap into five areas of social support: availability, reciprocity, practical support, emotional support
and event related support. The SSNI measures both the size of the individual's support network and the quality of emotional and practical support this network provides. Respondents are asked to list all people and/or groups to whom they feel close or who provide them with some support. Respondents are then asked to list their closest five network members and answer 11 questions about the composition and interaction of this network.

The scale takes between 15-20 minutes to complete. Each of the responses is rated on a 1-5 scale, indicating the amount of support received from no support (1) to maximal support (5). Categories of support networks can be partialled out, for example, family, school, coworkers, and spouse. Total numbers of individuals/groups that make up the support network are calculated, along with a score indicating general support provided, event related support and, lastly, overall social support.

The SSNI was originally validated on a sample of 207 non patients, 100 students, 74 members of an urban neighborhood and 32 members of a close knit religious community (Flaherty et al., 1983).

Internal consistency was tested using coefficient alphas and for each scale of the instrument values of between 0.760 and 0.906 were obtained. For each subgroup of the sample, the coefficient alpha figures fell between 0.79 and 0.85. Test retest reliability was 0.87. Concurrent validity measures were obtained using clinical interview ratings of level of social support with values of 0.78 obtained. Using a sample of 44 outpatients diagnosed with depression and 96 medical students, Flaherty et al. (1983) obtained good predictive validity measures dividing the sample into high or low social support groupings based on scores on SSNI, which resulted in significant differences in scores obtained on the Hamilton Depression Rating Scale.

The SSNI has been used to measure social support in male and female outpatients with depression (Flaherty et al., 1983; Richman & Flaherty, 1985), anxiety (Munir & Jackson, 1997), schizophrenia (Crotty & Kuly, 1985) and postnatal depression (Richman et al., 1991).
The SSNI was chosen for use in this study because it is simple to use, briefer than other social support measures reviewed, yet it has good validity and reliability data available (see appendix 9). The SSNI has been validated for use with both men and women and the postnatal population. It allows for a score of general emotional and practical support as well as life event related support (such as having a baby) and allows individuals, groups and organization to be measured inclusively or separately.

2.4.5 MEASUREMENT OF MARITAL / RELATIONSHIP SATISFACTION

Relationship satisfaction and quality is well documented as an important variable in both the development, maintenance and prevention of postnatal depression (Campbell & Cohn, 1991; Gotlib et al., 1991; Kumar & Robson, 1984; O'Hara & Zekosi, 1988; O'Hara, Schelte, Lewis & Varner, 1991; Marks et al., 1992; 1996; Romito et al., 1999; Watson et al., 1984). Within the current study, it was considered essential to obtain a measure of relationship satisfaction and to be able to measure changes over four assessment periods to accurately assess what, if any, impact the intervention made.

2.4.5.1 THE DEVELOPMENT OF THE DYADIC ADJUSTMENT SCALE

According to Spanier (1989) marital or relationship adjustment may be viewed both as a process and as the perception or evaluation of a state (Spanier, 1989), implying the need for assessment of perception over time. Prior to Spanier's (1989) work, relationship scales focused only on legally married couples, and thus were not applicable for couples living in a de facto relationship, or they focused on measuring only one aspect of adjustment. This lead to the development of the Dyadic Adjustment Scale.

The Dyadic Adjustment Scale (DAS; Spanier, 1989) is designed to measure the quality of adjustment in marriage and de facto relationships. It is one of the most widely used measures of relationship satisfaction and more than 1000 published studies have used the DAS. The DAS is considered to be one of the best scales currently available to assess relationship and family functioning (Stuart, 1992).

The 42-item scale consists of four subscales, dyadic satisfaction, dyadic consensus, dyadic cohesion and affectional expression. Dyadic satisfaction measures that amount of tension in the relationship and the extent to which the person has considered ending the
relationship. Dyadic consensus measures the extent of agreement between partners on matter of importance, such as finances and amount of time spent together. Dyadic cohesion assesses the common interests and activities shared by the couple, whilst affectional expression assesses the individual's satisfaction with the expression of affection and sex within the relationship. Each item is scored on only one subscale. A major advantage of the scale is its brevity, its clarity and the universality of item wording and response anchors. A total adjustment score is calculated by summing the four subscales (Budd & Heilman, 1993).

Normative data is reported for 218 married couples and 94 divorced couples (Spanier, 1989). The DAS is recommended for use both for research purposes and before and after therapy. Low subscale scores are indicative of having a problem in that particular area, while high subscale scores indicate an absence of a problem.

The normative sample used to develop the test has been criticized on the grounds of lacking representativeness beyond white middle class Americans and norms do not exist for homosexual couples or families with an alcoholic or psychiatrically ill family member (Stuart, 1992). Additionally, the divorced sample cited in the manual received a different administration procedure as their questionnaires were mailed up to one year after their relationship ended and asked respondents to retrospectively rate their relationship, obviously introducing possible bias (Stuart, 1992).

Investigation of psychometric properties reveals alpha reliabilities of 0.9 and above have consistently been found and a high test retest reliability of 0.96 has been found after 11 weeks 9 (Stuart, 1992).

Further research has suggested that four factors which constitute the four subscales may not be as independent as first thought, and it may be most accurate to describe the DAS as a measure of global relationship satisfaction (Stuart, 1992).

The DAS has been criticized for the content of some of its items which lack the ability to weight importance of items e.g. "agreement on religious matters" and "ways of dealing with in-laws" (Norton, 1983).
High convergent validity has been found between the DAS and the Locke-Wallace Marital Adjustment Scale (Locke & Wallace, 1959). Spanier (1989) has demonstrated differences between married and divorced couples and other research supports the concurrent and predictive validity of the DAS (Budd & Heilman, 1992). The DAS has also been found to correlate highly with self-esteem, marital communication scales and to correlate negatively with measures of depression (Budd & Heilman, 1992).

Overall, the DAS is well regarded for its psychometric properties, its ease of use and administration and its face validity with subjects (see appendix 8). The DAS provides a reliable and accurate measure of relationship satisfaction and adjustment over time. In addition, the DAS has been used in treatment studies to assess relationship satisfaction in the postnatal population, making it an appropriate choice for this study (Boath et al., 1999; Meager & Milgrom, 1996; Misri et al., 2000)

2.4.6 MEASUREMENT OF PARENT CHILD RELATIONSHIP AND PARENTING STRESS

The caregiver's ability to fulfill the needs of their infants and, hence, provide an optimal environment for early development is influenced by a host of variables, including the parents' own attitudes, expectations about parenting and child behaviour and their own levels of psychological and physical health during this period (Ainsworth, Blehar, Water & Wall, 1978; Bowlby, 1982; Bradley & Caldwell, 1997; Buist, 1996; Murray, 1988; 1992; Rosenblum et al., 1997). Obviously this will be affected by levels of depression, anxiety, social support available, relationship quality and perceived stress related to parenting.

The life changing transition to parenting and parenting itself provides many opportunities for exposure to potential stressors (Nicolson, 1998; O'Hara, 1995; Sherr, 1995). Everyday problems with the child such as feeding, sleeping, excessive crying and childhood minor illnesses are some examples.

The effect of stressors can be influenced by mediating factors such as depression. Depressive mood in a parent is often involved in a reciprocal relationship with stress, that is, depression is both increased by stress and causative of stress (Ostberg, Hagekull &
Wettergren, 1997; Quittner, Gluekauf & Jackson, 1991). The perception of being under stress has also been found to lead to a slower recovery from PND (Gotlib et al., 1991).

High levels of parenting stress are associated with dysfunctional parenting behaviour and negative interactions between parents and their children (Abidin, 1995). High parenting stress is also associated with deviant child development and psychopathology (Abidin, 1995).

The extensive resources required for detailed behavioural observations or in depth interviews used in previous studies e.g. (Bretherton, Biringen, Ridgeway, Maslin & Sherman, 1989; Cox, Owen, Henderson & Lewis, 1989) to assess parenting stress were not available for this study. The type of measure sought needed to be relatively brief, unintrusive and easy to use with the capacity to provide an accurate measure of parental perceptions about their infant and parenting. The measure needed to be able to be applied several times over a six month period. The Parenting Stress Index was selected for this study.

2.4.6.1 THE PARENTING STRESS INDEX
The Parenting Stress Index (PSI; Abidin, 1990) is a self report inventory designed to yield a measure of parental experiences of stress in the parent child system and to identify the sources of stress. The PSI includes components such as parental depression, sense of competence as a parent, and parent child bond or attachment. It was developed out of the literature on parent child interaction, attachment, child development, child psychopathology, childbearing and stress (McKinney & Peterson, 1997).

It is reported to be particularly useful in assessing family systems in the first three years of a child's life, however it has been standardized for use with children up to 12 year of age (Loyd & Abidin, 1985). The PSI was developed for use by researchers and clinicians for screening and early identification, pre and post measurement of intervention effectiveness, and for research (Abidin, 1995).
The PSI is the result of over three decades of work and six refinements (Wantz, 1992). Over 300 published research studies have used the PSI (Abidin, 1995). The PSI has been described as the best single questionnaire for parent-child interaction (Foreman, 1994).

The most recent version, form 6, consists of six child and seven parent subscales. The child domain scores are Adaptability, Acceptability, Demandingness, Mood, Distractibility, and Reinforces Parent. The parent domains are Depression, Attachment, Restrictions of Role, Sense of Competence, Sense of Isolation, Relationship with Spouse, and Parental Health. Respondents are asked to mark the answer that comes closest to describing how they feel on a continuum of 1 (strongly agree) to 5 (strongly disagree). Items are clear and simply worded. Abidin (1995) suggests a 5th grade reading standard is adequate for understanding.

The normative data for the PSI was derived from a sample of 2633 American mothers of children ranging from 1 month to 12 years and from 200 American fathers of children ranging from 6 months to 6 years. It has also been used in transcultural research validation studies.

Like many psychological instruments, the PSI has been criticized for the lack of representativeness of its validation sample (McKinney & Peterson, 1997). The sample could be best described as white, middle class, well-educated, urban dwelling Americans.

Reported discriminant validity evidence includes examination of PSI scores of mothers of children with special needs, such as cerebral palsy and intellectual disability. The PSI was able to successfully discriminate between physically abusive and non-abusive mothers and between mothers who receive low versus high amounts of support (Wantz, 1992).

Generally, the test retest stability appears to be high, indicating the PSI is a stable measure. Internal consistency of items appear to be adequate, based on factor analytical and correlational data provided in the manual.

Concurrent and construct validity have also been judged to be adequate, based on correlation with other parent-child behavior checklists, marital satisfaction, measures of
parental anxiety (state and trait) and changes in PSI scores following intervention (McKinney & Peterson, 1997; Wantz, 1992).

The results from the validity information presented suggest that the PSI is measuring an important aspect of parental perceptions which are directly related to child characteristics, parent child interactions, parental stress and child rearing problems (McKinney & Peterson, 1997).

In terms of validity within the population of mothers within the postnatal period, the PSI has been used with a random sample of 1081 middle class suburban Swedish mothers with children aged 6 months to 3 years (Ostberg et al., 1997). Measures of depression (EPDS), social support (interview) were also obtained and compared with psychologist ratings of the measured variables. Out of this large sample, 426 women had children less than 12 months of age. The PSI was found to have high alpha coefficients between subscales, good test retest stability over a 30 day period, and good concurrent validity between self-report scores and psychologists' ratings. In relation to PND, a higher degree of PND was significantly associated with more parental stress. Mothers who scored highly on parental stress also had less effective social networks and experienced less emotional support.

Most relevantly, the PSI has previously been used in treatment studies with the postnatal population (Gelfand et al., 1996; Meager & Milgrom, 1996).

The PSI Short Form is directly derived from the PSI full-length test (see appendix 7). All 36 items in the short form have been transferred identically from the long form test. It was developed to provide a test that could be completed in 10 minutes, when clinicians and researchers had a limited amount of time. A number of researchers who factor analyzed the PSI identified a 3 factor isolation, which make up the PSI short form (Abidin, 1995). The three subscales were labeled Parental Distress, Parent Child Dysfunctional Interaction and Difficult Child. From these a Total Stress Score is obtained.

The Parental Distress (PD) scale is said to measure the distress a parent is experiencing in their role as a parent, as a function of personal factors directly related to parenting. A lack of social support and presence of depression are component stresses associated with the
PD scale. The Parent Child Dysfunctional Interaction measures the parent child bond or attachment. This scale obtains measures of the parent's perception of his or her child and the fit between their expectations and the reality of their relationship. The Difficult Child subscale focuses on basic behavioural characteristics of the child that make them easy or difficult to manage. These behaviours are thought to be partly temperamental in origin and partly a reflection of environmental characteristics (Abidin, 1995).

Good reliability and validity information has been obtained for the PSI short form. The PSI short form was validated on a sample of 530 mothers who were undergoing routine 12-month well baby checks at medical practices in urban Virginia. A second sample of 270 who were undergoing routine well child checks for entrance into day care completed the full PSI. The short form and the full scale obtained very high correlation scores of 0.94, with 2 week test retest reliability of 0.95.

Internal consistency measures were also performed on the data obtained form the total sample of 800. Coefficient alpha scores for each of the subscales ranged between 0.80 and 0.91. Test retest scores for each of the subscales over a 6 month interval ranged from 0.78- 0.85 (Abidin, 1995).

The very high correlations obtained between the short and long form imply the PSI short form can be considered to be an accurate and consistent measure of the construct (Abidin, 1995).

2.5 CLINICAL ASSESSMENT INTERVIEW
Comprehensive assessment routinely begins with the measurement and description of the client's symptomatology. This is effectively accomplished through observation and through client and significant other reports, which often begin with an initial clinical assessment interview (Acierno et al., 1996).

An initial clinical assessment aims to: firstly, obtain an accurate and complete assessment of the client's problems; secondly, obtain a conceptualization of how the client's problems have developed, are maintained and interrelate, which will entail obtaining a background psychological, social, medical and vocational history of the client, as well information
regarding their current situation and any previous interventions they have undertaken; and finally, establish treatment goals and priorities based on the assessment and conceptualization (Frisch, 1992).

Whiffen (1992) describes the clinical interview as the most favoured method of assessment for the postnatal population. Certainly, the additional psychosocial and medical information readily obtained through interview is important as part of the assessment and intervention planning process (Barnett & Fowler, 1995; Buist, 1996a; 1996b; Creedy, 1993; Kowalenko et al., 2000; Pope & Watts, 1996; Zanetti, Sullivan & Evers, 1998).

This includes information pertaining to the several possible risk factors, such as: obstetric history, antenatal and postnatal psychological (current range of symptoms) and physical health, family psychiatric history, current life stresses, level of social support available, expectations regarding parenthood, relationship problems, ability to cope with practicalities of parenting, current level of functioning, infant temperament and health, knowledge of local resources, other services involved with the family and medications prescribed. O’Hara and Zekoski (1988) comment that this assessment of functioning, along with the act of seeking assistance, are cited to be important in evidence of major or minor depression diagnosis.

Clinical interviews provide an opportunity for women to develop rapport with the interviewer and elaborate on their feelings and experiences. It is also likely that mothers have difficulty determining what symptoms are normal and childbirth related, and what are beyond normal. These can be teased out within an interview setting (Whiffen, 1992).

This method was chosen over a standardized clinical interview or use of observer rating scales because of the specialized training required for use of these tools and the time involved in their administration. Additionally, the reliability and validity of observer rating scales, such as the MADRS (Montgomery & Asberg, 1979), and the Hamilton Rating Scale for Depression (HRSD; Hamilton, 1960), have been questioned by reviewers (Harris et al., 1989; Kearns, Cruikshank, McGuigan, et al., 1982; Maier, Heuser, Phillip, Frommberger & Demuth, 1988; Wickberg & Hwang, 1996).
In this study the clinical interview provided the researcher with the opportunity to assess the subject's suitability for the research project, or to offer alternative options, and to begin to establish a therapeutic relationship with the subject.

A semi structured clinical interview was conducted for each subject. The format followed was based on that adopted by Zanetti et al., (1998) in their "Bouncing Back" treatment programme (see appendix 10). This format was chosen because it was comprehensive, well-designed for easy use within the interview and compared well with other postnatal assessment recommendations (Barnett & Fowler, 1995; Buist, 1996a; 1996b; Cox & Holden, 1994; Creedy, 1993; Kowalenko et al., 2000; NHMRC, 2000; Pope & Watts, 1996;) and has been successfully used in a community treatment programme for over four years (Zanetti et al.,1998).

The clinical interview conducted also allows the DSM-IV criteria to be applied, which was necessary for diagnosis (see appendix 11). Semi - structured clinical interviews have been widely used in previous treatment studies (Gelfand et al., 1996; Holden et al., 1989; Meager & Milgrom, 1996; Misri et al., 2000).
CHAPTER 3

METHOD

OVERVIEW OF CHAPTER
This chapter describes the main body of this study. The characteristics of the subjects who were recruited and participated are detailed. The community from which the subjects were drawn is described, and the rationale for conducting the study within this community is given. The characteristics of the therapists who delivered and facilitated the intervention programme are provided. The study design and the processes involved in initiating and conducting such a community intervention programme are illustrated. A description of the intervention programme itself and how it was implemented is provided. Lastly a chronology of events is included.

3.1 SETTING
The intervention phase of this study was conducted between February 2000 and June 2001 in the Peel region of Western Australia. The Peel region, one hour south of Perth, covers an area of approximately 5,500 square kilometres, including 75 kilometres of ocean beaches and vast estuarine waterways. Agriculture, forestry, mining and tourism are the major employers (Lucks & Durack, 2001).

From its beginnings as a fishing and farming village, to a popular place for retirement, the Peel region has now become a desirable location for young families because of the promise of affordable housing and life by the sea. The Peel region is the most densely populated region within Western Australia, with a current population of 76,929 people in June 2001. The vast majority of these people reside in the city of Mandurah.

The region's accelerated growth in 2000 (5.2%) was the highest in Western Australia (Australian Bureau of Statistics, 1999). This growth is considered to have outstripped the
availability of government and non government organizations to resource the needs of the community (Lucks & Durack, 2001).

In 1998 children under 15 years represented 23.3% of the Peel regions' population, compared with 21.6% of the remainder of the state. This is estimated to increase to 30% in the next few years. Currently, 37% of Peel's population is under 25 years of age. The proportion of people aged 65 years and older in Peel was 14.4%; higher than the WA state average of 10.5% (Australian Bureau of Statistics, 1998). Approximately 2.6% of the Pèel regions' population are Indigenous Australians (Australian Bureau of Statistics, 1998).

The Peel region has one of the highest unemployment rates in Western Australia, 8.3% compared to the state average of 5.9%. The estimated youth unemployment rate for the region is 39%, the highest in Australia (Australian Bureau of Statistics, 1999; Lucks & Durack, 2001).

In the Peel region 56.88% of the population receive an average weekly income under $300, in comparison to 46.29% within the state as a whole. 16.38% of the Peel population earn $600 or more compared with 21.42% of Western Australians (Australian Bureau of Statistics, 1999).

The Peel region has high numbers of people with trade qualifications, 36.8% compared with a state average of 27.2% and low numbers of people with university education, 9.2% of the population holding an undergraduate degree and 0.8% of the population holding a higher degree (Australian Bureau of Statistics, 1998). Environmental factors which have been identified as barriers to accessing further education, training and services not offered within the community include lack of an adequate public transport system and a poor level of infrastructure and resources (Lucks & Durack, 2001).

3.2 RATIONALE FOR CONDUCTING THE STUDY IN THIS REGION
Health and allied health professionals, particularly child health nurses and community health workers, had for some time recognized a need for a structured treatment programme for women in the Peel region diagnosed with PND. This need surfaced in part, due to the preceding work that had been instigated by community health professionals in Peel, and
resulted in comprehensive and routine screening of all new mothers with the Edinburgh Post Natal Depression Scale (EPDS) (Cox et al., 1987) by child health nurses. Once women were identified as either suffering with PND or as being at high risk of developing PND, they were referred to the available local resources. These resources were minimal. They consisted of individual counselling with the psychosocial Community Health team, which already serviced the general community, or an open-ended, self-help support group. This lack of resources existed in conjunction with the changing demographic and social environment previously described, namely, an increasing population, particularly of young couples of childbearing age.

The number of birth registrations with the Peel Child Health Services for 1999 was 885; this was expected to increase substantially in 2000-1 (Peel Child Health Services Report, 1999). Thus, using the research literatures' most conservative estimate, 10% or 88 of these women would be expected to suffer with PND in 1999 (O'Hara et al., 1984; O'Hara, Schelte, Varner & Lewis, 1991; O'Hara & Swain, 1996). Taking into consideration those babies born in 2000 or in 2001, whose mothers would develop PND within the 12 month postpartum period, realistically, the region needed to provide services to a minimum of 160 potential women during the lifetime of the study. It was highly likely that the true figure would be considerably greater than this, given the Peel community matches socioeconomic and resource profiles of other Australian studies, such that conducted by Griepsma et al. (1994) where up to 57.8% of new mothers met the criteria for PND. In addition, due to the lack of public transport in the region and/or lack of financial resources, it was not feasible for Peel residents to access alternative structured treatment programmes offered in the metropolitan area.

For these reasons, and because it provided an opportunity for involvement in an innovative and practical research project with broad community application, the study was supported by the Peel Mental Health Service. This support consisted of the venue, office space and telephone, office equipment, stationary, crèche facilities for the groups run during office hours and, most generously, the time and expertise of the co-facilitators.

The Peel Mental Health Service (PMHS), one of the publicly funded mental health services in SouthWest Metropolitan Corridor, provides specialist mental health services to children,
adolescents and their families and carers in the Peel region. This includes assessment, treatment (both acute and short to medium term), advocacy and community integration services. The Peel Adult Mental Health Service has 47.37 clinical Full Time Equivalent (FTE) staff per 100,000 population, whilst the Child and Adolescent Service has 28.88 clinical FTE per 100,000 population (Piscitelli, 1998). The PMHS is located in the Mandurah townsite, on the same campus as the Mandurah District Hospital, making it easily accessible.

During the design and feasibility stages of the study, the local knowledge and opinions were sought from interested parties and stakeholders in health and allied health agencies within the region. Five meetings occurred between April and December 1999 that gauged the viability and local support for a research project of this style and size within the region. Participants at these meetings were PMHS staff, Peel Community Health staff, Peel Child Health Nurses and Psychosocial Team and Rockingham Kwinana Community Health Management.

Consultation occurred with health professionals from the Great Southern Community and Mental Health Service who had designed and conducted a structured treatment programme for women with PND that began in 1996.

Advice on the logistics and design of the study was sought from local experts within the area of PND at King Edward Memorial Hospital for Women in Subiaco, Western Australia.

The study was approved and endorsed by the Fremantle Hospital Human Research and Ethics Committee and the Murdoch University Human Research and Ethics Committee in December 1999 and February 2000 respectively.

3.3 DESIGN
One of the main aims of this study was to determine whether type of treatment determined differences in recovery rates from depression, anxiety and parenting stress and in marital satisfaction postnatally. More specifically, the study was interested in whether any type of treatment had a positive effect, in comparison to receiving no treatment and if so, what treatment was most effective.
3.3.1 ORIGINAL STUDY DESIGN

Initially, a pre-test, post-test, repeated measures controlled group design where subjects were randomly assigned to closed treatment groups was planned. Indeed, subjects were recruited under these conditions and consented to be randomly assigned. The treatment conditions were originally as illustrated in table 3.1.

In order to make any meaningful statistical conclusions from this study, four factors needed to be considered. These were the significance criterion, the sample size, the population effect size and the power of the analysis (Welkowitz, Ewen & Cohen, 1982). According to Cohen's power calculations table, using a significance criterion of 0.05, with a population effect size of 0.4 and a power value of 0.80, a cell size of 16 subjects for five groups is needed or a total sample size of 80 (Cohen, 1992).

Table 3.1: Original study design

<table>
<thead>
<tr>
<th>TREATMENT CONDITION</th>
<th>CONDITION COMPOSITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Condition 1</td>
<td>Women participating in a 10 week CBT group programme whose partners are also participating in a group programme</td>
</tr>
<tr>
<td>Condition 2</td>
<td>Women participating in a 10 week CBT group programme alone</td>
</tr>
<tr>
<td>Condition 3</td>
<td>Women participating in a 10 week CBT programme through individual therapy</td>
</tr>
<tr>
<td>Condition 4</td>
<td>Women forming a wait list control for a 10 week period</td>
</tr>
<tr>
<td>Condition 5</td>
<td>Men (partners of condition 1 women) participating in a 6 week CBT men's group programme</td>
</tr>
</tbody>
</table>

It was anticipated that the group interventions programme would need to be run at least twice in order to obtain sufficient numbers of subjects per treatment condition, taking into consideration that no more than 8 subjects per therapy group is feasible at any one time (Pope & Watts, 1996).

3.3.2 FINAL STUDY DESIGN

As detailed below in the section dealing with subject recruitment, the original design of the study was modified during the course of the research.
Table 3.2: Final study design

<table>
<thead>
<tr>
<th>TREATMENT CONDITION</th>
<th>CONDITION COMPOSITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Condition 1</td>
<td>Women participating in a 10 week CBT group programme whose partners are also participating in a group programme</td>
</tr>
<tr>
<td>Condition 2</td>
<td>Women participating in a 10 week CBT group programme alone</td>
</tr>
<tr>
<td>Condition 3</td>
<td>Women participating in a 10 week CBT programme through individual therapy</td>
</tr>
<tr>
<td>Condition 4</td>
<td>Women forming a 10 week control group who are part of an ongoing self-help support group</td>
</tr>
<tr>
<td>Condition 5</td>
<td>Men (partners of condition 1) participating in a 6 week CBT men’s group programme</td>
</tr>
<tr>
<td>Condition 6</td>
<td>Men (partners of condition 2 &amp;3) who acted as a control group by filling out measures but not participating in any form of intervention</td>
</tr>
</tbody>
</table>

The final design was a repeated measures controlled group design with matched subject allocation to conditions (see Table 3.2). This ensured subjects were as equivalent as possible on key variables. Experimental control was maintained through manipulation of the independent variables, that is, the intervention type the subjects received, the time when the measurements were taken and which groups of subjects were measured (Mitchell & Jolly, 1988)

3.4 INITIAL SUBJECT SELECTION CRITERIA

In an attempt to balance ethical and research considerations, several subject inclusion and exclusion criteria were set for this study.

Subjects who were eligible for inclusion in the study met the following criteria. They were women currently in a relationship (aged 18 years and over), who had given birth to a live baby in the previous 12 months and who had been assessed to be suffering with postnatal depression. The study was open to all women scoring 10 or above on the EPDS (Cox et al., 1987). A subsequent diagnosis through clinical interview of PND was needed for inclusion in the study.

Women’s partners needed to be prepared to participate in the intervention component of the study and the women in the study had to be prepared to provide consent for the
researcher to maintain contact with their general practitioner throughout the course of the intervention.

Use of medication was **not** an area of exclusion from the study, however women participating consented to full disclosure of their medication usage throughout the course of the study (see appendix 1). Finally, women in the study had to be prepared to participate in 10 weeks of either individual or group therapy.

Subjects were excluded from the study using the following criteria: current psychotic symptoms or a diagnosis of puerperal psychosis, a recent history of dangerous or impulsive behaviour, significant learning difficulties or non English speaking. Additionally, subjects who were currently undergoing any other form of psychotherapy were excluded from participation.

All subjects were fully informed of the nature of the interventions offered the measures to be taken and were advised their participation was voluntary (see appendix 2). Subjects were advised they could withdraw from the research study at any time without jeopardizing their right to alternative treatment.

A number of ethical issues were considered and accommodated within the study. Firstly, subjects who were assessed to be at a high risk of suicide were to be offered additional treatment with appropriate staff at Peel Mental Health Service (PMHS). These subjects could remain in the intervention they began if they wished; however, their data would not be utilized for the study.

Secondly, it was planned that subjects on the wait list who became severely depressed and were in need of treatment would be offered treatment from appropriate staff at PMHS. Any data collected from these subjects would not be used within the study. It was planned that all subjects on the wait list would be offered treatment at the conclusion of the 10 week wait list period.
Thirdly, existing protocols between PMHS and Family and Children’s Services would be followed should child protection concerns be identified during the course of the research period.

3.5 RECRUITMENT AND SELECTION OF SUBJECTS

Subjects in this study were recruited through two main channels. They were either self-referred or they were referred through health and or allied health agencies within the region.

After ascertaining the need for a structured intervention programme of such magnitude, and engaging in detailed consultation with all the major stakeholders, a project promotion and subject recruitment campaign was embarked upon. The aims of the project promotion were: firstly, to highlight awareness of the existence of postnatal depression, secondly, to educate the public and health and allied health professionals about the disorder and the treatment options offered in the study; and thirdly, to advise about referral procedures.

Promotion of the project was tackled in a variety of ways. To begin with each health and allied health agency in the Peel region that may have contact with women and children or families was contacted and subsequently visited by the researcher during the months of December 1999 to March 2000. During this meeting the researcher introduced herself, provided details of her qualifications and experience, outlined the aims of the study, explained the inclusion and exclusion criteria explained and provided information about the interventions offered. Information was also provided regarding referral procedures. At this time any questions or concerns that agencies had were answered.

Brightly coloured flyers and brochures detailing the project, written in non-technical language, were distributed during this time for use with possible referrals. Agencies were requested to display promotional material in their offices and clinics, which they all agreed to do. All agencies contacted were also provided with written information for potential subjects explaining the purpose of the research and the treatment they could expect to receive. Written information targeted at health and allied health professionals, which included more specific treatment information, was also distributed (see appendix 3).
The health agencies contacted included:

- Every medical practice within the Mandurah, Pinjarra, Waroona, Golden Bay and Port Kennedy area
- Peel Community Child Health Nurses
- Peel Child and Adolescent Mental Health Team
- Peel Adult Mental Health Team
- Peel Community Health Psychosocial team
- Mandurah Hospital Social Worker and Maternity Ward
- Rockingham Community Child Health Nurses
- Health Matters (A public health resource service)
- Mandurah Paediatrics (A specialist paediatric service)
- Rockingham Community Hospital
- KEMH Social Work and Psychology Departments
- Woodside Maternity Hospital
- St John of God Murdoch Maternity Ward
- Ngala Mother and Infant Resource Centre
- Sudden Infant Death Syndrome, Mandurah
- Rockingham Division of General Practitioners

Allied health agencies contacted included:

- Family and Children’s Services in Mandurah and Rockingham
- Parent Information Centres in Mandurah and Rockingham
- Community Link And Network
- Waroona Community Centre
- Mandurah Women’s Refuge
- Milligan Association and ARAFMI
- Peel Youth Programme
- Allambee Counselling Service
- Relationships Australia
- Mandurah Rotary Club
• South West Division of General Practitioners
• Mandurah Senior High School
• Stirling Naval Base Community Counselling Service
• Mandurah Men’s Support group
• Nursing Mothers Association, Mandurah
• 7 child care centres within the Mandurah region
• Fremantle Women’s Health Centre
• Women’s Health Care House, Perth
• Alcoa Counselling Service

Throughout the course of the study regular contact was made with these agencies by phone or in person and mail outs of flyers and brochures occurred approximately every 3 months. Progress reports on the research containing broad information, such as numbers attended and verbal feedback received, were mailed out to referrers every 6 months.

Promotional posters were put up in the town library, Shire offices, community centres, waiting rooms of general practitioners, the Parenting Information Centre, Childcare Centres, Community Health and Mental Health waiting rooms.

The researcher conducted 4 separate print media interviews with local papers, the Mandurah Telegraph, Mandurah Mail and Rockingham Sound Telegraph and the West Australian Newspaper, between March and May 2000. The study was promoted in the SouthWest Division of General Practice newsletter and in information packs being distributed to every new mother who gave birth at Mandurah Hospital. Radio interviews were conducted with local radio, Coast FM and University Radio 6NR.

The researcher was invited to give oral presentations promoting the study to the Mandurah District Hospital, the Southwest Division of General Practice, Peel Child and Adolescent Mental Health Service and Peel Adult Mental Health Service, the Mandurah Districts Rotary Club and the Mandurah Senior High School during 2000 -1.
The researcher regularly attended both internal and external intake meetings, internally within Peel Mental Health Services and externally with Community Health Psychosocial Team and the Child Health Nurse Team as groups and with individual practitioners to discuss potential referrals, the progress of the research project and to answer questions.

Referrals began to be received from February 2000. Both written and phone referrals were accepted to reduce barriers to access. All potential subjects were individually contacted by the researcher initially by phone or mail or both. Information regarding the research study was mailed out to participants and assessment interview appointments were set.

3.5.1 DIFFICULTIES EXPERIENCED IN COMMUNITY RESPONSE
Despite the well organized and comprehensive promotional programme conducted to recruit subjects for the study, the volume of response was less than anticipated. Difficulties were encountered in obtaining a sufficiently large enough pool of subjects to randomly assign them to interventions. This meant that random assignment had to be abandoned, and matched sampling occurred where subjects were allocated to interventions by the researcher. All subjects, however, were still prepared to participate in any one of the interventions, thus they were not self-selecting interventions.

Ethically and practically, however, the attempt to have a wait list control group was unsuccessful. Referral bodies wanted treatment offered to their referrals as soon as possible. The women themselves, once diagnosed with PND, were not prepared to wait around for 10 weeks for treatment and stated they would seek treatment elsewhere.

These problems are not unusual and have been noted in the treatment literature previously undertaken with this subject population. Meager and Milgrom (1996) had 10 women on a wait list and ended up with three remaining. Appleby et al. (1997) state they did not attempt to use a control group for ethical reasons. Wisner et al. (1999) and Rowe et al. (1996) did not attempt any type of control group.

3.6 THE SAMPLE
Eighty nine women expressed interest in participating in the study. These women were either self referred or had been referred through formal channels. This resulted in 61
women presenting for an initial assessment for inclusion in the study. This includes 10 women who agreed to act as a control group, who were part of an existing support group of 28 members.

In total, a sample of 85 women and men participated in the study. This sample comprised of 53 women and 32 men. Forty six women enrolled in an intervention component of the study. Thirty nine women completed some form of intervention, with 7 dropping out from the intervention component of the study. Of the 10 women who agreed to form the control group, 7 completed all measures over the 10 week control period. Three women accepted packets of measures but did not return them. Thirteen men completed the intervention, with the remaining 16 men forming a control group. Three men dropped out of the intervention. Reasons for attrition and calculated rates are provided in chapter 4.

3.6.1 WOMEN'S CONTROL GROUP
Within the Peel region an open-ended, non-structured support group exists for women with PND. The group aims to provide a safe place for women to talk about their concerns openly and freely and to learn from others experiences. The group could best be described as fitting a self-help model where the group members 'owned' the group process. This support group has been running almost continuously for over eight years, and is facilitated by a Community Health social worker and child health nurse.

The researcher approached the support group members to act as a control sample for the study by completing two sets of measures (the same as those completed by the experimental groups) 10 weeks apart. The control group also provided the researcher with demographic, medical and personal history information to ensure they met the eligibility criteria for the study (see appendices 1 & 10). The researcher attended three consecutive group meetings to recruit subjects, as different women attend each week. Initially, 10 women volunteered to participate and 10 packets of measures were distributed. Seven women completed both pre and post measures. Post measures were collected by the researcher 10 weeks after the first measures were collected.
3.6.2 MEN'S CONTROL GROUP
All male partners of women who participated in the 10-week group programme for women only or the 10 week individual therapy programme agreed to participate in any aspect of the study and were issued with measures at the same time as their female partners. That is, pre treatment, immediately post treatment and at 3 and 6 months post treatment.

3.7 FACILITATOR/THERAPIST
The principal therapist/facilitator in this study was the researcher (and author) who conducted all the initial assessment interviews, the individual Cognitive Behavioural Therapy (CBT) programme and co-facilitated both the women's and the men's CBT group programme. The use of one consistent therapist rather than several therapists was considered important in an effort to reduce therapist variables and to maintain treatment integrity. The researcher (and author) was a 30 year old female who had completed the clinical and theoretical course components of the Doctor of Applied Clinical Psychology programme at Murdoch University, Western Australia. The researcher (and author) had worked as a registered psychologist for a period of 8 years, primarily in mental health arenas with families and children, and had several years experience and appropriate professional training in both group and individual therapy.

3.7.1 GROUP CO-FACILITATORS
Two female and two male mental health professionals co-facilitated the women's and men's groups respectively during the 18 month treatment phase.
Co-facilitator 1 was a Senior Occupational Therapist in her mid 30's, with over 10 years experience working within the mental health field. She had several years' experience working previously with women with PND including co-facilitation of groups for this client population.

Co-facilitator 2 was a 40 year old female Mental Health Nurse, who had several years experience in both Australia and the United Kingdom working in mental health, and, in particular, co-facilitating groups for women. Co-facilitator 2 is currently completing post graduate training in psychotherapy.
Co-facilitators 3 and 4 were both men in their 40's. Co-facilitator 3 was a Senior Social Worker and Manager of the Peel Mental Health Service. He is a highly experienced group therapy clinician with many years' experience working with clients with mental health issues.

Co-facilitator 4 is a Mental Health Nurse who has worked in acute and community mental health setting for over 10 years. He had previous experience counselling individuals, but no group work experience.

All co-facilitators were familiar with CBT. They received up to 12 hours training by the researcher in the CBT intervention programme used, prior to its commencement. This involved working through the programme manual and exercises. Throughout the course of the treatment phase, in order to ensure consistency and standardization of the treatment, the co-facilitators met with the researcher for an hour prior to the group session for preparation, and for 30 minutes after the group for debriefing.

3.8 INSTRUMENTS
The instruments selected for use in this study were the Edinburgh Postnatal Depression Scale (EPDS, Cox et al., 1987), the Beck Depression Inventory (BDI-II, Beck et al., 1996), the Beck Anxiety Inventory (BAI, Beck & Steer, 1990), the Parenting Stress Index (PSI, Abidin, 1995), the Dyadic Adjustment Scale (DAS, Spanier, 1989) and the Social Support Network Inventory (SSNI, Flaherty et al, 1983). Please see chapter 2 for a complete review of these measures.

3.9 PROCEDURE
The treatment phase of this study was run continuously over 18 months between February 2000 to June 2001. The final 6 month follow-up measures were collected in November 2001.

3.9.1 ASSESSMENT AND PRE-TESTING
Within seven days of being referred to the study, subjects were contacted by the researcher by telephone and written material was mailed out outlining the study (see appendix 3). The purpose of this phone contact was multifold: firstly, to ensure the subjects
were aware they had been referred to the study; secondly, to provide a brief explanation of
the study, what it entailed, what it could offer them and what was required of them, thirdly,
to introduce the researcher to the subjects and to begin establishing a therapeutic rapport
with them; and fourthly, to provide the subjects with an opportunity to ask questions either
about the study and/or about what they were experiencing.

Some subjects were eager to set up assessment interview appointments immediately,
others preferred to wait until they had received the written information in the mail. Subjects
were then recontacted by the researcher within seven days and the next available
assessment interview was scheduled. Generally, the time between initial referral and
assessment interview was less than seven days. However, the researcher attempted to
contact subjects up to three times by phone and twice by mail before writing back to the
referrer to inform them that attempts to establish contact had been unsuccessful.
Subjects who did not arrive for their scheduled initial assessment interview were
recontacted by telephone the following day by the researcher and up to 3 appointments
were rescheduled.

All subjects underwent a clinical assessment interview lasting between 1 and 1.5 hours
conducted by the researcher at PMHS. The assessment interview proforma was based on
that designed by Zanetti et al. (1998) and Pope & Watts (1996) with some modifications to
include additional demographic information, symptoms, symptom duration and frequency
and information relating to previous terminations and miscarriages (see appendix 10). The
research study was again explained to subjects, what they could expect and what was
required of them was repeated. Any questions subjects had were answered during this
time.

At this time subjects also completed the EPDS (Cox et al., 1987). This was scored whilst
the subjects were present and they were informed of the results and given an explanation
of the scale. All subjects had an EPDS score of 12 or greater at the start of the study.
Suicide risk assessments were performed for those subjects who scored highly on the
question relating to suicidal ideation (n=10) and PMHS protocols were followed. Information
regarding all treatment options available in the region was provided to all women. Subjects
who were eligible for the study and wished to participate, read the "participant information
sheet' (see appendix 2) and provided voluntary written consent to participate in the study. Subjects also provided consent to inform their GP of their participation in the study, and for the researcher to contact their doctor with progress reports. Upon departure, participating subjects were given an envelope containing the remaining pre test measures and administration instructions for themselves and one for their partners. The partners' envelope also contained the written information and consent form. These were collected at the next meeting or handed into the reception desk prior to this. Subjects received written confirmation of their inclusion and commencement dates and venue details (see appendix 12.). Subjects who were not eligible or those who did not wish to participate in the study (n=5) were referred to alternative appropriate services available within the region.

3.9.2 VALIDITY ISSUES IN SUBJECT ASSESSMENT
Some subjects who had been referred by their GP or by local psychologist had undergone an assessment prior to being referred to the programme. The researcher did not review these assessments prior to interviewing the subjects. These subjects were assessed using the same procedure as subjects who had self referred.

A small random sample of six subjects were assessed by either the PMHS Consultant Psychiatrist, Psychiatric Registrar or Clinical Psychologist prior to being assessed by the researcher. Again, the researcher was blind to these assessments prior to interviewing the subjects. 100% agreement was obtained on the DSM-IV diagnosis of major depression with postpartum onset for these six subjects.

3.9.3 ALLOCATION TO TREATMENT INTERVENTION
Subjects were allocated according to convenience and to the need to match samples to ensure similarity in important demographic and risk characteristics. These characteristics were age, age of infant, use of medication, prior history of depression, family history of depression, number of children, education level, traumatic birth, reported stress in the 12 months leading up to birth, level of social support and previous history of terminations, stillbirth and miscarriages. Thus, all initial subjects entering the study were allocated to the 10-week group programme where their partners also received the 6-week group programme. When eight female subjects and their male partners had been allocated to the first groups, the subjects being referred to the study were allocated to the individual
programme. As referrals were received, they were duly allocated according to equivalence and spaces available in the ongoing interventions.

3.10 INTERVENTION PROGRAMME DELIVERED
Three different intervention programmes were delivered to subjects. A 10-week CBT group therapy programme for women. A 10-week CBT individual therapy programme for women and a 6-week CBT group programme for male partners.

3.10.1 THE WOMEN'S 10-WEEK GROUP PROGRAMME
The CBT group treatment programme implemented was based on the Bouncing Back Support and Treatment programme (Zanetti et al., 1998). This programme aims to provide an environment of social and emotional support where women are able to share experiences of PND and learn constructive ways to assist in recovery. The programme consists of an educational component, giving factual information about PND, relaxation and stress management skills, cognitive therapy aimed at tackling erroneous beliefs, problem solving skills, pleasant activity scheduling and encouragement of networking and building additional social support networks.

Some alterations were made to this programme. These alterations were made to incorporate more rigorous cognitive and behavioural skills training, relapse prevention training and to extend the Bouncing Back programme by one session. The Bouncing Back programme was designed to have one session out of the 10 where both partners attend together. Because the present study aimed to investigate the impact of offering male partners a more comprehensive programme than a one-off session, an alternative session exploring self esteem and introducing strategies to improve self esteem was incorporated. Similarly, the Bouncing Back Programme included a session addressing issues surrounding problems in mother-infant communication associated with PND and possible consequences of this. During the co-facilitator training and initial stages of the study, both the researcher and the co-facilitators believed this could be interpreted in a critical fashion by mothers who were already feeling extremely guilty as a symptom of their depression. Thus, this session's focus was changed to addressing difficulties in dealing successfully with conflict within interpersonal relationships and general communication skills.
Thus, the 10-session programme included (see appendix 13a): factual information about PND and maternal mood disorders, including symptoms and causative theories and known risk factors; relaxation and stress management strategies, including breathing and progressive muscle relaxation training; self esteem building strategies, pleasant activity enhancement and scheduling; building social support networks, communication skills and conflict resolution training; the cognitive behavioural model, cognitive restructuring, identifying and challenging and replacement of unhelpful automatic thoughts and beliefs; life planning and goal setting and relapse prevention training.

During the first group, subjects were distributed an information pack which contained relevant articles on PND, factual information on maternal mood disorders, information on medications and a booklet on local resources and services for families (see appendix 14).

Each week subjects were provided with a session handout detailing the content of the session and containing exercises to be completed within the session (see appendix 15 for an example).

Each session followed a structured session plan, which included overhead presentations, written tasks, some small group work, role-plays and group discussions. Subjects completed 'homework' tasks each week, which followed on from the week's topic, for example, practicing progressive muscle relaxation exercises daily.

The 10 consecutive sessions were held weekly for two hours within the group therapy room at PMHS. A free on site crèche was provided for the duration of the group. The crèche was staffed by three childcare workers who were contracted for the duration of the research project. This enabled mothers to have two hours focused on themselves without having to be worried about attending to their babies or toddlers.

Each week reminder calls were made by the researcher to the group participants to provide some reinforcement for attendance and to provide them with an opportunity to ask questions or give feedback on the previous group session. At this time, any potential difficulties with transport were dealt with. Because one of the important features of the
group programme was the ability to increase social support networks, subjects were encouraged to share lifts and make contact with each other outside of the group context.

At the conclusion of the 10-week programme, the group participants were provided with an opportunity to meet again in four weeks time to discuss their progress and to maintain contact with the other group participants.

3.10.2 **THE WOMEN'S 10-WEEK INDIVIDUAL THERAPY PROGRAMME**

The 10-week individual therapy programme was identical in content to the group programme described above, however it was delivered in individual therapy format by the researcher (see appendix 13b). Sessions lasted for one hour. Subjects were provided with the same materials and resources and given homework tasks to complete each week. Subjects were also given the opportunity of a 4-week follow-up contact meeting with the researcher.

3.10.3 **THE MEN'S 6-WEEK GROUP PROGRAMME**

A comprehensive group programme aimed at men, who are not traditionally seen as the primary client, is a novel approach not found in the literature on PND to date. Generally, what has been documented is one-off information evenings for partners (Morgan et al., 1997; Pope & Watts, 1996; Zanetti et al., 1998), with the recent exception of Misri et al. (2000) who conducted 4 sessions with couples.

The researcher's objectives in offering a men's programme were multi-fold: firstly, to provide the male partners with an opportunity to learn factual information about PND; secondly to provide them with an opportunity to have men's own experiences heard and acknowledged; thirdly, to provide an understanding of the content, the philosophy and skills and strategies the women were learning to tackle their depression; and lastly, to provide an opportunity to gains some skills and strategies to enhance their functioning and combat potential stress overload and depression.

Hence, the present 6-week programme was based on a combination of the essential psychoeducational and cognitive behavioural components of the women's programme and recent literature written specifically for men about parenting in modern society and the
challenges this brings (Australian Association for Infant Mental Health, 1997; Biddulph, 1995; 1996; 1997; Family and Children's Services, Government of Western Australia, 1999). The programme was assessed and proof-read by the PMHS Senior Clinical Psychologist and co-facilitators prior to implementation.

Specifically the six session programme included factual information about PND and maternal mood disorders, including symptoms and causative theories and known risk factors; perspectives on fathering/ parenting and exploration of personal belief systems surrounding fathering, relaxation and stress management strategies, communication skills and conflict resolution training, the cognitive behavioural model and an introduction to cognitive therapy (see appendix 13c).

The six consecutive, weekly sessions were two hours in duration, held from 6-8pm on a weeknight at the PMHS group therapy room. The time slot was chosen to ensure maximum possible attendance from the male partners, all of whom were working during office hours. The groups were facilitated by the researcher and a male facilitator to ensure gender appropriateness. The men were offered a follow-up meeting four weeks after the conclusion of the men's programme to ensure maintenance of gains.

Prior to the commencement of the men's group, the researcher organized evening appointments either at the subject's home or at the PMHS, depending on what was more convenient for the subjects. The purpose of this appointment was to meet the male partners and begin the therapeutic alliance, to explain the group programme and to provide them with an opportunity to ask any questions they had.

3.11 POST TESTING
All subjects were provided with packets of measures to complete immediately after the intervention. These contained stamp self-addressed envelopes and could be mailed back or dropped in to the PMHS reception. Subjects received up to three mailed reminder notices printed on brightly coloured paper and a phone call to ensure measures were returned within a four week period of receipt (see appendix 16).
3.12 FOLLOW-UP MEASURES
Follow-up measures were taken three and six months post intervention to establish whether any treatment effects obtained were maintained over time. Envelopes of measures were mailed out to subjects. These envelopes contained stamped self-addressed return envelopes. Again, subjects received up to three mailed, brightly coloured reminders and a phone call to ensure measures were returned in a timely fashion.

3.13 TREATMENT INTEGRITY
Treatment integrity was ensured through adherence to the following procedures: firstly, the content, structure, format and materials of the treatment programme session by session for each of the groups and for each individual subject sessions were strictly adhered to; secondly, the researcher was the principal facilitator/therapist for each group and individual subject in the study and the co-facilitators had received adequate training in the programme delivered; thirdly, the researcher participated in fortnightly clinical supervision where the progress of the programme was reviewed by the PMHS Senior Clinical Psychologist, providing a validity check on treatment integrity.

3.14 PROGRAMME EVALUATION
In order to provide an additional validity check on the effectiveness of the programme delivered, and to obtain the subjects feedback on the process they had experienced and the changes they or those around them had noticed, all subjects were asked to complete a written evaluation form on the programme they had participated in. This occurred in the final session. In addition, the subjects who had completed the group programmes were asked to participate in a focus group interview.

Subjects who participated in the treatment study completed self-report questionnaires at the end of the intervention. The 14-item women’s questionnaire was developed by the Bouncing Back Treatment Package (Zanetti et al., 1998). It has been previously used in community treatment interventions. It contained six multiple-choice questions relating to the benefits perceived from programme attendance and six open-ended questions asking subjects to elaborate on benefits. One question asks subjects to rate the specific value of treatment components and one question asks for general feedback. The multiple-choice questions were rated using a five-point Likert scale (see appendix 17).
The men completed a 5-item self-report questionnaire. This included one multiple-response question using a five-point Likert scale and four open-ended questions. The questionnaire surveyed perceived gains from the programme, including specific skills and strategies, usefulness of the knowledge gained and recommended changes (see appendix 18). As inclusion of men in intervention for PND is relatively novel and obtaining feedback regarding the intervention is rare, the questionnaire was developed by the researcher for this study. An important consideration was minimizing intrusiveness for the subjects, bearing in mind the time and energy commitments already sought from the men participating in this research. The questionnaire was piloted on experienced clinicians (psychiatrists, psychologists, mental health nurses and occupational therapists) to check face validity and obtain information regarding comprehensibility and ease of completion.

3.15 REFERRER EVALUATION

Another measure designed in part to act as a validity check of the intervention efficacy was the referrer's evaluation. Towards the conclusion of the treatment phase, all referral agents were mailed out an evaluation questionnaire and a stamped self-addressed envelope (see appendix 19).

This was a 14-item questionnaire, consisting of 10 multiple-choice questions based on a five-point Likert scale. Items assessed knowledge of the programme, satisfaction with the programme, views on the most successful components of the treatment, changes observed in anxiety, depression and stress levels of clients, satisfaction with feedback and referral process. Four open-ended items requested information regarding how often they had seen their client, changes they had noticed in their clients, changes they recommended to the programme and overall comments. These professional opinions on practical issues were sought in acknowledgement of their importance in planning future service delivery and or research of this kind. The items were loosely based on the client questionnaire used for the women in this study, where applicable.

This evaluation form was developed in consultation with the PMHS Consultant Psychiatrist, Clinical Psychology Team, the group facilitators and the researcher's academic supervisor.
to ensure comprehensibility and face validity. This was then pilot-tested with PMHS staff and relevant changes made, before being mailed out for use with external referrers.

3.16 FOCUS GROUP INTERVIEWS
The focus group interview is one of several methodologies that fit under the umbrella of qualitative research. The primary aim of this method of research is to "understand and represent actions of people as they encounter, engage and live through situations" (Elliot, Fischer & Rennie, 1999, p.216).

A focus group interview is as "a group interview centered on a specific topic and facilitated and coordinated by a moderator or facilitator" (Sim & Snell, 1996; p. 189).

Focus groups are an economical way of tapping views of a number of people. They provide information on the 'dynamics' of attitudes and opinions in the context of the interaction that occurs between participants (Robson, 1993). Focus groups often encourage a greater degree of spontaneity in the expression of views than alternative methods of data collection (Morgan, 1995). In combination with this, they can provide a safe forum for the expression of views, where respondents need not feel obliged to respond to every question (Krueger, 1994; Vaughn, Shay Schumm & Sunagub, 1996).

Focus groups are appropriately applied to provide information to assist in interpreting unexpected findings or to provide verification in interpreting data that may otherwise be conjecture (Sim, 1998). Focus groups provide alternative explanations that cannot be obtained using traditional methods and facilitate decision making by providing further information from the stakeholder or consumer. The current research adopted the use of this method for these applications, consistent with Vaughn et al.'s (1996) recommendations.

A phenomenological approach was adopted to the focus group interviews, as one of the purposes of the interviews was to obtain understanding of the experience of PND, and subsequent participation in an intervention programme from the client's point of view (Robson, 1993). The other purpose was to utilize the focus groups to measure consumer
satisfaction with the intervention programme offered and obtain recommendations for programme improvement.

3.16.1 PROCEDURE FOR FOCUS GROUP INTERVIEW

Group participants were quizzed about their interest in participating in a focus group interview early on in the group programme and then again in week seven of the 10-week programme. The purpose of the interview, how it would be conducted and what would be expected of the subjects was outlined. For the first women's and men's group, the focus group interviews were recorded by hand, by the group co-facilitator. In keeping with action research (Robson, 1993), it became apparent that audio-taping the interviews would be a preferable method of data recording because it would provide a complete transcript of events. This enabled exact quotations from subjects to be utilized (King, Lyons Morris, Fitz-Gibbons, 1987).

Thus for subsequent groups, the researcher's preference for audiotaping the interview, as well as taking hand written notes, was explained. It was clearly repeated that participation was voluntary and subjects were requested to complete a signed consent form (see appendix 21).

All subjects agreed to participate in the focus group interviews. Table 3.3 Details the numbers of participants in each focus group interview.

Table 3.3: Numbers of participants in each focus group by intervention group

<table>
<thead>
<tr>
<th>Intervention group</th>
<th>No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>W1 - women w/partner in M1</td>
<td>6</td>
</tr>
<tr>
<td>W2 - women w/partners in M2</td>
<td>8</td>
</tr>
<tr>
<td>W3 - women only</td>
<td>5</td>
</tr>
<tr>
<td>W4 - women only</td>
<td>5</td>
</tr>
<tr>
<td>W5 - women only</td>
<td>6</td>
</tr>
<tr>
<td>M1 - men w/partners in W1</td>
<td>5</td>
</tr>
<tr>
<td>M2 - men w/partners in W2</td>
<td>8</td>
</tr>
</tbody>
</table>

All the focus groups were conducted in the second half of the final session. The focus groups were held for between 30 and 60 minutes duration.
3.16.2 SETTING
The focus group interviews were conducted in the group therapy room at PMHS, the same room that subjects had utilized for the 10-week programme. Thus, any contextual variables were eliminated.

3.16.3 FOCUS GROUP INTERVIEW MODERATOR AND QUESTIONS
The moderator of all the focus group interviews was the researcher. The co-facilitators acted as scribes for the interview process, and assisted the moderator in teasing out issues on an ad hoc basis. The conversation was guided by the moderator. The moderator used a variety of open and closed questions and probes throughout the interview, in addition to the pre-prepared questions (see appendix 20). The moderator emphasized the desirability of open, honest feedback in the introduction to the interviews. As recommended by King et al. (1987), the focus group interview questions were rehearsed by the moderator and co-facilitators prior to the interview.

3.16.4 GENERAL PURPOSE
The general purpose of the focus group interview was to obtain the subjects' views on their experiences both within the programme they had competed and with PND.

3.16.5 GOALS
The goals of the focus group interview were, firstly, to validate the quantitative data that was being collected in the study and, secondly, to extend the quantitative data by exploring the subjects' perception about 1) the experience of PND 2) their experience of participating in the programme 3) the effective change ingredients in the programme 4) what could be changed within the programme.
Obtaining such information from the participants would assist with the further development of effective treatment programmes.

3.16.6 VERIFICATION
The 'big ideas ' (Krueger, 1994; Vaughn et al., 1996; Trierweiler & Stricker, 1998) that emerged from the focus group interviews were discussed and teased out by the moderator and the co-facilitator in debriefing sessions conducted immediately after the interview.
The use of the written evaluation form prior to the focus group beginning (see appendices 17 & 18) was a triangulation and verification method, partly used in an attempt to obtain individuals' perspectives on issues that may differ from the group as whole and to control against dominant group consensus taking over and not allowing dissenting views to be voiced in the focus group interview (Carey, 1995).

3.16.7 PROCEDURES FOR DATA TRANSCRIPTION
Immediately after the focus groups the researcher obtained the written notes from the co-facilitators, reviewed these and added notes regarding the mood and non-verbal information obtained from the interviews.

The audiotapes were transcribed by a secretarial service and then examined by the researcher (moderator) both visually and by reviewing the audiotapes to check for accuracy. At this time corrections to the transcripts were made.

The analysis procedure adopted was that advocated by Krueger (1994), Carey (1995) and Vaughn et al. (1996). The next step was the identification of the 'big ideas' or key ideas that emerged from the participant's words, the non verbal communication and the emotional strength of the feedback delivery. These 'big ideas' can be thought of as working hypotheses about the major themes that emerge from the interviews (Vaughn et al., 1996). Each of the seven interviews were analyzed in this way and seven sets of big ideas were generated.

Each interview was then reviewed and the data categorized into units of information of the smallest piece of information that was informative by itself. These units were cut into slips of paper and then categorized into themes, considering the big ideas originally identified. The goal of this process being to refine and summarize the data. The interviews were then grouped into the major research design groupings, and themes common to these groups ascertained, that is, the men's interviews were combined, the women's groups 1 and 2 (women whose partners participated in intervention) and women's groups 3, 4, and 5.
3.17 CHRONOLOGY OF EVENTS

1999

April 13  Initial formal contact and discussions with Peel Mental Health Service
May 5    Meeting at Peel Community Health with Child health Nurse Manager
May 13   Meeting at Peel Community Health with Psychosocial team re proposal
June 5   Meeting at Peel Mental Health with manager
June 24  Meeting with Sheryl Pope (King Edward Memorial Hospital) for advice and
consultation on proposal
June 30  Submit research Proposal to Fremantle Hospital Human Research Ethics
Committee
October 1Response from Fremantle Hospital Ethics Committee
October 8Presented research proposal to Fremantle Hospital Ethics Committee
Dec 2     Obtained ethics approval from Fremantle Hospital Ethics Committee
Dec 8     Submitted proposal for ethics approval from Murdoch University Human
Research Ethics Committee
Dec 14   Meetings with CLAN, ARAFMI, Allambee and South West Division of General
Practitioners to promote project
Dec 20   Meeting with Waroona Community Centre Coordinator to promote project
Dec 22   Meeting with Pinjarra Community Health Centre and Mandurah Hospital
Social Work Department to promote project

2000

Jan 2    Meeting at Mandurah Women's refuge to promote project. Meeting with
Milligan Association
Jan 4    Meeting with Peel Family and Children's Services manager to promote project
and contact with ALCOA Family Services Coordinator
Feb 8    Meeting with General Practitioners at Pinjarra Medical Practice, Connolly
Medical Centre and Yet Che Low's Practice.
Meet with staff involved in co-facilitation of groups to begin training and
familiarization with programme.
Feb 9    Meeting with General Practitioners at Greenfields Family Medical Practice,
Forum Medical Centre, and Forrest House Medical Centre.
Feb 10  Meeting with General Practitioners at Murdoch Drive Medical Centre, Waroona Medical Centre
Feb 10  Approval obtained from Murdoch University Human Research Ethics Committee
Feb 11  Meeting with General Practitioners at Halls Head Medical Centre. Meeting with Mandurah Districts Rotary Club to promote project
Feb 14  Meeting with ward sister at Mandurah Hospital Maternity Wing
Feb 15  Meeting with General Practitioners at Falcon Grove Medical Centre. Meet with co-facilitators for training.
Feb 16  Meeting with General Practitioners at Murray Medical Centre, Dr William Chow and SIDS Mandurah to promote project
Feb 17  Meeting with General Practitioners at Silver Sands medical Centre to promote project. Promotional posters put up in community library, shire offices, community centres, shopping centres.
Feb 22  Project promotion with King Edward Memorial Hospital for Women Social Work and Psychological Medicine Department, Fremantle Women's Health Centre.
         Interview with Mandurah Telegraph local paper
Feb 23  Project promotion with Nursing Mother's Association Peel Representative, Rockingham Hospital Maternity Ward Supervisor
Feb 24  Meeting with Child Health Nurses re project start date and referral procedures
Feb 28  Meeting with regional principles of Child Care Centres to promote the project. Supervision with Senior Clinical Psychologist
March 1  Meeting with General Practitioners at Golden Bay Medical Centre and Port Kennedy Medical Centre
March 2  Attended intake meeting at Community Health to discuss referral procedures
March 7  Promotional meeting with staff at Peel Child and Adolescent Mental Health Service. Meet with staff involved in co-facilitating to finalize dates and arrangements for groups.
         Attended supervision with Senior Clinical Psychologist
March 14  Project promotion with Defense Community Organization and Maritime West Psychology Unit HMAS Stirling.
        Attended supervision with Senior Clinical Psychologist
March 15  Mail out promotional flyers and referral forms to all General Practitioners in the Peel region.
March 16  Project promotion with Network Family Support
March 17  Project promotion meeting with Relationships Australia.
March 21  Project promotion with Dr Patton, Obstetrician.
March 22  Presentation to Peel Adult Mental Health Team promoting project and explaining referral procedures.
        Presentation to Division of South West General Practitioners re project.
        Contact made regarding project with Woodside Maternity Hospital, St John of God Murdoch and Fremantle Hospital Social Work Department.
March 23  Project promotion with Mandurah Pediatrics, Rockingham Division of General Practitioners.
March 27  Project promotion with Rockingham Family and Children's Services
March 28  Meeting with Peel Mental Health and Community Health Managers.
        Meeting with co-facilitators for training/coordination of programme.
March 29  Meeting with Peel Mental Health Consultant Psychiatrist and Senior Clinical Psychologist
April  4  Start first men's group
April  5  Start first women's group
April 11  Supervision with Senior Clinical Psychologist
April 18  Contact Community Radio to promote project
April 19  Interview with Rockingham Sound Telegraph re project
April 30  Project promotion at Rockingham Parenting Information Centre
May  2  Supervision with Senior Clinical Psychologist
        Meeting with Consultant Psychiatrist to update on progress and review referral
May  5  Meeting with Child Health Nurses at Rockingham, Kwinana, Singleton and Golden Bay.
        Project promotion with Dwellingup Child Health Centre
May  9  Meeting Peel Post Natal Depression reference group to update progress
May 16  Mail out promotional flyers and progress update to local allied health organizations e.g. Family and Children’s services.
      Attend intake meeting at Community Health.
      Supervision with Senior Clinical Psychologist

May 17  West Australian newspaper Health and Medicine section publishes article based on the project

May 30  Supervision with Senior Clinical Psychologist

June 6   Supervision with Senior Clinical Psychologist
      Meeting with Consultant Psychiatrist to review progress and referrals

June 13  Meeting with Peel Mental Health Manager re progress of project

June 20  Supervision with Senior Clinical Psychologist

June 27  Attend intake meeting at Community Health to provide progress update and discuss possible referrals

June 28  Women's group 2 begins

July 4   Men's group 2 begins

July 10  Supervision with Senior Clinical Psychologist

August 2 Women's group three begins

August 5 Interview conducted to promote project on University Radio 6NR

August 8 Supervision with Senior Clinical Psychologist

August 22 Mail out promotional flyers and update to all local General Practitioners and allied health agencies.
      Meeting with Consultant Psychiatrist to review referrals

Sept 1   Mail out 3 month follow up measures to group one

Sept 5   Supervision with Senior Clinical Psychologist

Oct 3    Supervision with Senior Clinical Psychologist

Oct 18   Begin women's group 4

Oct 24   Mail out promotional materials to all referrers

Oct 25   Meeting with manager of Peel Mental Health Service re progress of project

Oct 31   Supervision with Senior Clinical Psychologist

Nov 14   Meeting with Peel PND Reference Group re progress of project

Nov 27   Supervision with Senior Clinical Psychologist
      Meeting with Consultant Psychiatrist to update on progress and review cases
Nov 29  Mail out 3 month follow-up measures for group 2 and 6 month follow up measures for group 1.
Dec 14  Attend Child Health Meeting to update on progress of project
Dec 20  Mail out 3 month follow up measures for group 3.

2001
Jan 2   Attended supervision with Senior Clinical Psychologist
Jan 3   Meeting with Manager Peel Mental Health Service. Promotional material including a progress update sent out to all referrers (health and allied health). Meeting with Consultant Psychiatrist Peel to update on progress and review cases
Jan 6   Southwest Division of General Practice contacted and article promoting project submitted for newsletter
Jan 11  Attended Community Health meeting to obtain referrals and update on project
Jan 16  Meeting with Manager Peel Mental Health and Senior clinical Psychologist re progress update and future directions
Feb 7   Begin women's group 5
Feb 14  Supervision with Senior Clinical Psychologist. Meeting with Consultant Psychiatrist
Feb 28  Mail out 6 month follow up measures for group 2
March 9  Attended PND support group to recruit control group
March 14  Attended Child Health Nurse meeting to provide an update on the project
March 16  Attended PND support group to recruit control group
March 19  Presentation to Mandurah District Hospital providing details of the project's progress
March 23  Attended PND support group to recruit control group
March 26  Supervision with Senior Clinical Psychologist
March 28  Mail out 3 month follow up measures for group 4 and 6 month follow up measures for group 3. Supervision with Senior Clinical Psychologist. Meeting with Consultant Psychiatrist re evaluations
April 12  Mail out evaluations to all referrers regarding project
April 20  Supervision with Senior Clinical Psychologist
June 1   Attend PND support group to distribute follow up measures
June 8  Attend PND support group to distribute follow up measures
June 29  Mail out 6 month follow up measures for group 4
August 6  Mail out 3 month follow up measures for group 5
Nov 2    Mail out 6 month follow up measures for group 5.
CHAPTER 4

RESULTS

OVERVIEW OF CHAPTER
The results are presented in two parts. Part one of the chapter presents the quantitative results. The chapter begins by describing the study’s sample, and explaining attrition rates. This is followed by the descriptive statistics for the sample. The sample’s pre test measures are compared to the normative population on standardized measures. The relationship between women’s use of medication and variables measured is described. An explanation of the statistical procedures used is provided. The results of the research hypotheses are addressed individually for all measures. Part two of the chapter presents the qualitative results. The findings of the focus group interviews and lastly, the results of the programme evaluation completed by both subjects and referrers are detailed.

PART ONE

4.1 ATTENDANCE AND ATTRITION RATES
As detailed in the method section, originally 89 women expressed interest in participating in the study. These women had either been directly referred or had self referred. Some of these women did not meet the eligibility criteria for the study, and so were referred to other appropriate services. Others did meet the criteria but did not attend the scheduled assessment appointment. Wherever possible, the researcher re-contacted these subjects up to three times and re-scheduled appointments. Fifty-eight women or 65.1% of the original sample underwent initial assessment for inclusion in the study. Of these, 53 women or 91% of those assessed initiated the 10-week group or individual CBT programme or acted as a control group. This comprised 51.7% of the original respondents. Five women did not move past the initial assessment (8.6%) either because they did not meet the inclusion criteria, or once they found out more about the intervention, they did not feel it was appropriate for them.
Of the 46 women who began the intervention, 7 or 15.2% dropped out of the study, resulting in a treatment completion rate of 84.8% for the women in the study. The reasons given for the attrition, included relocating (2), returning to full time work (2), travelling around Australia (1), choosing private inpatient therapy (1) and finding the programme did not suit their needs (1).

The support group from which the control group was drawn comprised 28 women. Ten or 35.7% expressed interest in participating in the study. Seven or 70% of these women completed both sets of pre and post measures. No information is available to explain the non-participation of the remaining 3 women.

Thirty-two men participated in this study out of a possible sample of 39 men. The partners of women who participated directly in the intervention. This represents an 82% response rate for men. Sixteen women and their partners were enrolled in the group programme initially. Thirteen men or 81.25% completed 80% or more sessions of the group programme. Three men or 18.75% dropped out of the intervention or completed less than 80% of sessions, citing work commitments as the reason for their attrition. Two of these men worked in the mining industry and one worked in the navy.

Table 4.1: Details of participant's numbers by type of treatment

<table>
<thead>
<tr>
<th>Intervention type</th>
<th>Number enrolled</th>
<th>No. completing 80% &gt; session</th>
</tr>
</thead>
<tbody>
<tr>
<td>W1 -women w/partners in M1</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>M1 -men w/partners in W1</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>W2 -women w/partners in M2</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>M2 -men w/partners in W2</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>W3 -women only</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>W4 -women only</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>W5 -women only</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>W6 -individual therapy</td>
<td>10</td>
<td>9</td>
</tr>
<tr>
<td>C1 -control women</td>
<td>10</td>
<td>7</td>
</tr>
<tr>
<td>C2 -control men w/partners in M3,4,5</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>C3 -control men w/partners in M6</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

Sixteen men completed measures to act as controls. Their partners were directly involved in either group or individual therapy. Eleven men (68.7%) had partners participating in the
group intervention and 5 men (31.25%) had partners participating in the individual intervention.

Table 4.1 presents a breakdown of the number of subjects who enrolled in each intervention and the number who completed 80% or more sessions. It is evident that attrition was fairly evenly spread across groups.

4.2 DESCRIPTIVE STATISTICS AND PRELIMINARY ANALYSIS

4.2.1 CHARACTERISTICS OF WOMEN UNSELECTED FOR THE STUDY
A total of five women did not participate in the programme after the initial assessment interview. Three of these women presented with a primary presenting problem other than PND that needed to be addressed as the primary issue. Two women, whose primary presenting issue was PND, elected to seek private therapy.

As indicated in Table 4.39a in appendix 22 the mean age of women who did not move beyond the initial assessment into the treatment intervention was 30.4 years (SD= 4.6), making these women slightly older than the experimental group. Forty percent of these women were in a defacto relationship and 60 percent were married. The largest occupational grouping in this subgroup was homemaker (40%). The mean number of children was 1.8, and for 40% of the sample, this was their first child. For 80% of the sample, the age of their infant was 6 months or less. Forty percent of this subgroup reported experiencing a traumatic birth, and for 60% the pregnancy was planned. Sixty percent of this subgroup reported a previous history of depression, with the same number having sought counselling previously. Twenty percent believed they had suffered antenatal depression and 80% reported a family history of depression or anxiety. Eighty percent of the sample reported stress in the six months leading up to the birth of the infant and 80% reported the onset of their depression within the first 6 months postpartum. Sixty percent of this group were using psychotropic medication at time of interview. The mean EPDS score was 16.4 (SD = 3.6).

Chi-square analyses were performed on all categorical demographic variables comparing the non-selected sample of women with the selected sample (see Table 4.40 in appendix
22). No significant differences were obtained for any of the variables when the two groups were compared, suggesting there were no differences between selected and non selected women on demographic variables, many of which have been shown to be risk factors for PND. This provides evidence to indicate that the women involved in the study were representative of the community population of women with PND.

T-tests were performed on the continuous variables of age, number of children, breast-feeding experience, mother's health during pregnancy, infant's health after the birth, mother's health after the birth, perceptions of bonding, support given by partner and family and friends and pre intervention EPDS scores. Again, no significant differences were obtained between the two groups, indicating strong similarity prior to intervention as seen in Table 4.41 in appendix 22.

4.2.2 CHARACTERISTICS OF SUBJECTS WHO COMPLETED THE STUDY
A total of 46 women completed the study either involved directly in the intervention components (group with partners involved in men's group; referred to as 'group partners involved' n=14, group women only n=16 or individual therapy, n=9) or by acting as controls (n=7). Table 4.39 (Appendix 22) provides details of the demographic characteristics of these subjects. The overall mean age of the women in the study was 28.4 years (SD=4.6), with an age range of 20 to 38 years. The majority of women in the study (63%) were married, with an average of 2 children, although for 39% of the sample, this was their first child. Seventy percent of their infants were 6 months or younger, reflecting the early onset of depression in these women. For the vast majority of the sample (93%) the onset of their depression was reported as first occurring in the first 6 months postpartum.

In general, this sample of women fit the education and training demographic profile of the Peel community. Thirty-five percent of the sample had tertiary level education in the form of technical college qualifications, with only 11% having any form of university education. Correspondingly, 11% of the sample reported holding a professional occupation prior to having their current baby. The largest occupational grouping reported was that of 'homemaker' with 30% of the women reporting this status. The next largest occupational grouping (20%) was 'sales/administration'.
Information regarding the women's pregnancy and birthing experience was obtained for all subjects. For 61% of the sample, the latest pregnancy was a planned pregnancy. Forty-six percent of this sample reported experiencing a traumatic birthing process, with the largest number of complications being recorded as emergency caesarian sections (13%). Exactly half of the sample rated their health during their pregnancy as 'good' (50%), this dropping to 46% post delivery. Seventy percent of the sample rated their infant's health as 'good' post delivery. The experience of breast-feeding was roughly evenly distributed in this sample with 37% rating their experience as 'good', 28% as 'fair' and 35% as 'poor'. Most women in the sample rated their perceptions of bonding with their infant post delivery as 'positive or neutral' (83%). Eighty-five percent of the sample rated the support they received from family and friends as being 'good or fair', this fell to 76% of partner's support being rated as 'good or fair', leaving 24% of this sample rating the support they received from their partner post delivery as 'poor'.

A smaller proportion of subjects reported they had experienced a previous termination, miscarriage or stillbirth. The statistics for these being 13%, 13% and 2% of the sample, respectively. When asked to recall their life experiences, the majority (63%) of the sample reported a prior episode of depression. In an attempt to substantiate these reports, subjects were then asked whether they had sought counselling for this episode, and 30% of the sample indicated that they had. Twenty-four percent of the sample reported that they believed they had suffered antenatal depression. A large majority of women in the study reported a family history of depression or anxiety (76%). Forty-three percent of the sample were taking prescribed antidepressant medication at the time of the assessment interview. Four percent of the sample ceased using this medication during the treatment intervention, four percent commenced medication during the treatment intervention and 13% ceased medication post treatment.

Eighty-two percent of the sample reported being stressed in the 6-month period leading up to the birth of their baby. Relationship conflict (22%) was the most commonly cited reason for this, followed by financial problems and family conflict (15%, respectively).

Table 4.39 shows that all the subgroups are similar in age, apart from those receiving individual treatment being slightly younger, with a mean age of 27 years (SD=6.74)
compared with an average of just over 28 years for the other groups. More subjects in the 'individual treatment' group were living in de facto relationships than in any other grouping (56%). The treatment 'group partners involved' had the highest number of subjects who were legally married (71%). The control subjects were slightly better educated with 28.6% of this sample having university education, compared with 11% of those receiving 'individual' treatment and 7.1% and 6.3% of those receiving 'group partners involved' or 'group women only' treatment. In terms of occupations declared, more 'individual therapy' subjects described their occupation as 'homemakers' (44.4%) did than other treatment groups. None of the subjects in the control group described themselves as working in a professional or trade occupation, whilst this spread was relatively even in other treatment groups.

Subjects receiving 'individual' treatment were more likely to have only one child (55.6%) than other groups, whilst 14.3% of the control group and the 'group partners involved' intervention had four children. There were slightly more infants older than 6 months in the control group (57.1%), and this pattern reversed for other intervention groups. The 'individual' treatment group reported the least number of traumatic births (33%), the control group reported the greatest (57.1%). The intervention 'group partners involved' recorded the highest number of emergency caesarian sections at 57.1% of the sample. This intervention group also recorded the highest number of planned pregnancies (71.4%) with the 'individual' intervention recording the lowest (44.4%).

In terms of health during pregnancy, the control groups and the 'group partners involved' reported the best health during pregnancy with means of 1.42 (SD= .53 and .75, respectively), where the lower the score, the better the health. Again these groups reported the best maternal health after the birth. The control group reported the worst infant health after the birth with a mean of 1.57 (SD=. 78) whilst the 'group partners involved' reported the best, mean of 1.28 (SD=. 62). The 'group women only' reported the best perception of bonding with their infant post delivery, with 93.8% of the group reporting positive or neutral bonding experiences. This group also had the poorest breast-feeding experiences with 43.8% of the group describing their experiences as 'poor'. The control group reported the poorest perceived level of support obtained from family and friends with 42.9% describing this as 'poor'. In comparison with the 'group women only' of whom, 43.8% described the
support received from family and friends as 'good'. Interestingly this group reported the lowest levels of support received from partners for the sample with 31.3% describing the level of support they received as 'poor'.

The control group recorded the highest number of miscarriages with 28.4% of the sample having had a miscarriage, whilst the individual group recorded the highest number of terminations with 22.2% of the sample having undergone a termination. The 'group women only' was most likely to report a previous history of depression with 68.8% of the group doing so. The 'group partner involved' and the control group were most likely to have sought counselling for their depression. In both the individual group and the control group all subjects reported the onset of depression occurring in the first 6 months postpartum. The control group was most likely to report that they had experienced antenatal depression (42.9% of the sample). The control group had the greatest number of subjects taking medication for depression prior to intervention with 57.1% doing so, in comparison with the individual intervention with 33.3% of the group taking antidepressant medication. More subjects in individual therapy recorded ceasing medication post intervention than in any other group (22.2%).

All subjects in the control group reported experiencing stress in the 6 months leading up to the birth of their infant, for most this was in the form of financial problems (28.6%) or family conflict (28.6%).

Chi-square analysis revealed no statistically significant differences between means when groups were compared on the range of demographic factors, suggesting the groups were obtained from the same population of women with PND. This is illustrated in Table 4.42 in appendix 22.

Again, the demographic variables such as age, number of children, breast-feeding experience, support obtained from partner, family and friends and health during and after pregnancy were subjected to ANOVA to test for significant pre-intervention differences between the groups. No significant differences were obtained, highlighting the pre intervention similarity between the four groups. Table 4.43 in appendix 22. Provides
information regarding the ANOVA performed on the continuous demographic variables and pre treatment information for the intervention groups.

Table 4.2: ANOVAs on pre intervention psychometric measures for women: group partner involved (1), group women only (2), and individuals (3) and control groups (4).

<table>
<thead>
<tr>
<th>Measure</th>
<th>Group</th>
<th>Mean</th>
<th>SD</th>
<th>F-values</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edinburgh Postnatal Depression Scale (EPDS)</td>
<td>1</td>
<td>16.9</td>
<td>3.5</td>
<td>.822</td>
<td>(3, 45)</td>
<td>.489</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>18.3</td>
<td>4.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>16.2</td>
<td>3.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>16.6</td>
<td>4.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beck Depression Inventory (BDI) -II</td>
<td>1</td>
<td>29.1</td>
<td>7.9</td>
<td>.733</td>
<td>(3, 45)</td>
<td>.538</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>26.0</td>
<td>9.9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>24.1</td>
<td>6.4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>25.1</td>
<td>8.7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beck Anxiety Inventory (BAI)</td>
<td>1</td>
<td>19.1</td>
<td>13.0</td>
<td>.977</td>
<td>(3, 45)</td>
<td>.413</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>14.4</td>
<td>10.4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>11.7</td>
<td>7.9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>17.6</td>
<td>12.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dyadic Adjustment Scale (DAS)</td>
<td>1</td>
<td>96.28</td>
<td>15.9</td>
<td>.254</td>
<td>(3, 45)</td>
<td>.858</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>101.75</td>
<td>20.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>97.55</td>
<td>16.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>100.8</td>
<td>21.9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parenting Stress Index (PSI)</td>
<td>1</td>
<td>95.1</td>
<td>17.1</td>
<td>.115</td>
<td>(3, 45)</td>
<td>.951</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>94.7</td>
<td>24.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>90.4</td>
<td>17.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>94.1</td>
<td>19.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Support Network Inventory (SSNI)</td>
<td>1</td>
<td>3.26</td>
<td>.34</td>
<td>1.139</td>
<td>(3, 45)</td>
<td>.344</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>2.77</td>
<td>.95</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>3.11</td>
<td>.81</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>2.98</td>
<td>.64</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.2 above shows that the four groups, although producing different means on the psychometric measures taken pre intervention, were not statistically different when compared using analysis of variance tests.
4.2.3 COMPARISON WITH POPULATION NORMATIVE FIGURES FOR STANDARDIZED MEASURES

According to the BDI-II (Beck, Steer & Brown, 1996) for pre intervention measures all the women in this sample fall in the 'moderate' depression range with the 'group partner involved' falling in the 'severe' range. These scores are based on total scores of outpatients diagnosed with depression, fitting the profile for moderate to severe depressive disorders.

Total score ranges for the interpretations of the BAI (Beck & Steer, 1990) are as follows: 0-9, normal level of anxiety; 10-18, mild -moderate anxiety; 19-29, moderate to severe anxiety; and 30 - 63, severe anxiety. The scale was developed on clinical and non-clinical populations. As indicated in Table 4.2 above, the mean pre intervention BAI scores indicate that this sample of women fall in either the 'normal' range of anxiety or 'mild to moderate' anxiety levels. The 'group partner involved' scored the highest mean BAI ratings, putting them in the 'mild to moderate' anxiety classification.

All the women in this sample scored low on SSNI (Flaherty & Richman, 1986), indicating low social support, when compared with the standardized sample of American college students whose mean score was 4.02. The 'group partner involved' and 'group women only' were closest to this mean with pre intervention SSNI mean total scores of 3.26 respectively.

The sample total mean DAS scores compared with the normative data obtained from divorced and married middle class North American couples, indicate that the relationship adjustment ranges between being slightly below average to average adjustment pre intervention. The group 'women only' were the best adjusted overall, whilst the 'group plus partner' were the least well adjusted by a small margin. This profile is commensurate with theory and prior research discussed in the introduction, which suggests that depression strains relationships. Smolen, Spiegel & Martin (1986) found that low DAS scores were related to depression and ineffectual communication between partners.

The samples' mean PSI pre intervention scores were all at or above the 90th percentile, suggesting these women are experiencing clinically significant levels of stress. This total score reflects personal parenting distress, stresses derived from the parents’ interactions.
with their child, and stresses that arise from the infant's characteristics, as perceived by the parent. The PSI's normative sample consists of 530 North American families. In fact, for the three subscales, which make up the total stress score, this sample's mean scores all fell at or above the 75th percentile. The parental distress subscale was at or above the 90th percentile, a level that has been found to occur in the depressed female population and is indicative of poor personal adjustment with the parenting role, impaired sense of parenting competence, conflict with the child's other parent and lack of social support.

4.2.4 COMPARISON OF EXPERIMENTAL GROUPS AND SUBJECTS WHO FAILED TO COMPLETE THE TREATMENT

A group of 7 women began the intervention component of the study, but failed to complete the programme. The reasons for this are documented above. In order to ascertain whether this subgroup was significantly different from those who completed the intervention, chi-square analysis and t-tests were performed on the demographic and pre intervention measures. As Tables 4.46 and 4.47 in appendix 22 shows there were no significant differences on any of the demographic variables between the groups, illustrating their pre intervention similarity.

T-tests were performed on the continuous variables of age, number of children, breast feeding experience, mother's health during pregnancy, infant's health after the birth, mother's health after the birth, perceptions of bonding and support given by partner and family and friends and pre intervention EPDS scores. Again, no significant differences were obtained between the two groups, confirming that there were no systematic differences between those who completed and those who failed to complete the treatment. (see Table 4.47 in appendix 22).

4.2.5 COMPARISON BETWEEN SUBJECTS WHO WERE USING ANTIDEPRESSANT MEDICATION AND THOSE WHO WERE NOT

Within this study, a proportion of women were using prescribed antidepressant medication prior to the intervention. Apart from the ethical dilemmas, it was not feasible to exclude those using medication from the study, as this would have presented another barrier to involvement in the research. Additionally, the response rate obtained was not sufficiently large enough to eliminate women using medication from the study. Instead a tracking
system was implemented. Medication type, dose and cessation and commencement information was obtained from subjects in the study. Appendix 23 provides details of the types of medications and dosages being used by women in the study.

In order to establish whether there were significant differences between medicated and non-medicated women in demographic variables or in depression, anxiety, parenting stress or relationship satisfaction scores prior to intervention chi-square and t-test analyses were undertaken.

Table 4.3: Chi-square tests comparing those subjects using antidepressants (n=26) with those who are not (n=32) at pre test.

<table>
<thead>
<tr>
<th>Demographic variable</th>
<th>Chi square value</th>
<th>df</th>
<th>Asymp. Sig. (2 sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marital status</td>
<td>1.353</td>
<td>1</td>
<td>.245</td>
</tr>
<tr>
<td>Occupation</td>
<td>4.368</td>
<td>6</td>
<td>.139</td>
</tr>
<tr>
<td>Education level</td>
<td>2.383</td>
<td>2</td>
<td>.311</td>
</tr>
<tr>
<td>Age of infant</td>
<td>.640</td>
<td>1</td>
<td>.424</td>
</tr>
<tr>
<td>Traumatic birth</td>
<td>.034</td>
<td>1</td>
<td>.855</td>
</tr>
<tr>
<td>Type of trauma</td>
<td>6.61</td>
<td>5</td>
<td>.251</td>
</tr>
<tr>
<td>Planned pregnancy</td>
<td>1.555</td>
<td>1</td>
<td>.212</td>
</tr>
<tr>
<td>Previous termination, miscarriage, stillbirth</td>
<td>1.848</td>
<td>3</td>
<td>.605</td>
</tr>
<tr>
<td>Previous history of depression</td>
<td>5.88</td>
<td>1</td>
<td>.015*</td>
</tr>
<tr>
<td>Previous counselling</td>
<td>7.92</td>
<td>1</td>
<td>.005**</td>
</tr>
<tr>
<td>Antenatal depression</td>
<td>1.892</td>
<td>1</td>
<td>.169</td>
</tr>
<tr>
<td>Family history of depression/anxiety</td>
<td>5.043</td>
<td>1</td>
<td>.025*</td>
</tr>
<tr>
<td>Medication change during treatment</td>
<td>8.71</td>
<td>3</td>
<td>.033*</td>
</tr>
<tr>
<td>Onset of depression</td>
<td>.610</td>
<td>1</td>
<td>.435</td>
</tr>
<tr>
<td>Reported stress in 6 months &lt;birth</td>
<td>4.89</td>
<td>1</td>
<td>.027*</td>
</tr>
<tr>
<td>Type of stress reported</td>
<td>2.58</td>
<td>6</td>
<td>.859</td>
</tr>
</tbody>
</table>

*Indicates significance at the p<.05 level, ** Indicates significance at the p<.01 level.

Table 4.3 above presents the results of the chi-square analysis. The group using antidepressants prior to intervention were found to be significantly different from the group not using antidepressants on measures directly relating to depression. Firstly, this group
was more likely to have a previous history of depression and to have sought counselling for this. This group was significantly more likely to report a family history of depression or anxiety and to report experiencing high levels of stress in the 6 months leading up to the birth of their infant. The groups were similar on all other variables.

T-tests were performed on the pre-test continuous variables and measures to compare the subjects using antidepressants before the intervention with those who were not. The t-tests indicated that there were no significant differences between the two groups on any of the pre-test measures, apart from age, where women using antidepressants prior to the intervention were older than those who were not (see Table 4.4 below).

Table 4.4: T-tests comparing demographic variables of subjects using antidepressants (A, n=26) and those not (N, n=32)

<table>
<thead>
<tr>
<th>Demographic variable</th>
<th>Groups</th>
<th>Mean</th>
<th>SD</th>
<th>t-values (df=56)</th>
<th>Sig. (2 tail)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>A</td>
<td>30.23</td>
<td>4.7</td>
<td>2.635</td>
<td>.011*</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>27.18</td>
<td>4.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of children</td>
<td>A</td>
<td>2.07</td>
<td>1.0</td>
<td>1.2</td>
<td>.203</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>1.75</td>
<td>.87</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Breast feeding experience</td>
<td>A</td>
<td>2.03</td>
<td>.72</td>
<td>.595</td>
<td>.554</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>1.91</td>
<td>.92</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Support given by partner</td>
<td>A</td>
<td>1.88</td>
<td>.76</td>
<td>-.591</td>
<td>.557</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>2.0</td>
<td>.72</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Support given by family/friends</td>
<td>A</td>
<td>1.73</td>
<td>.72</td>
<td>-.438</td>
<td>.663</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>1.81</td>
<td>.69</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mother's health after birth</td>
<td>A</td>
<td>1.69</td>
<td>.61</td>
<td>1.64</td>
<td>.105</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>1.68</td>
<td>.79</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mother's health during pregnancy</td>
<td>A</td>
<td>1.69</td>
<td>.62</td>
<td>.354</td>
<td>.725</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>1.62</td>
<td>.79</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infant's health after birth</td>
<td>A</td>
<td>1.5</td>
<td>.71</td>
<td>.354</td>
<td>.725</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>1.25</td>
<td>.44</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceptions of infant bonding</td>
<td>A</td>
<td>1.88</td>
<td>.76</td>
<td>.871</td>
<td>.387</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>1.71</td>
<td>.68</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* indicates significance at the p<.05 level
Table 4.5 presents the results of the t-tests on the measures of depression, anxiety, parenting stress, relationship satisfaction and level of social support taken prior to intervention. The women taking antidepressant medications prior to intervention were significantly more likely to have higher depression scores on the BDI-II and higher parenting stress scores than women who were not using antidepressants.

Although there exists a fairly even distribution of women taking medication and those who are not across groups, further analysis was then undertaken to explore the group taking antidepressants. This group was re-classified into those taking a dose of antidepressant medication below 50mg versus those taking a dose of medication 50mg and above daily. Chi-square analyses were conducted on the demographic variables between those using daily medication doses below 50mg and those 50mg and above to compare the subgroups on pre test variables. There were no significant differences between dose groups on any demographic variable as shown in Table 4.6 and Table 4.48 in appendix 22. See appendix 23 for medication doses and types.

Table 4.5: T-Tests on pre-intervention psychometric measures for subjects using antidepressants (A, n=26) and those who were not (N, n=32) at pre test.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Groups</th>
<th>Mean</th>
<th>SD</th>
<th>t-values (df=56)</th>
<th>Sig. (2 tail)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPDS</td>
<td>A</td>
<td>17.57</td>
<td>3.8</td>
<td>.828</td>
<td>.411</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>16.78</td>
<td>3.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BDI-II</td>
<td>A</td>
<td>29.21</td>
<td>8.51</td>
<td>2.446</td>
<td>.018*</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>23.9</td>
<td>7.29</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BAI</td>
<td>A</td>
<td>17.26</td>
<td>11.58</td>
<td>1.370</td>
<td>.177</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>13.2</td>
<td>9.97</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DAS</td>
<td>A</td>
<td>102.1</td>
<td>19.89</td>
<td>.941</td>
<td>.351</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>97.26</td>
<td>17.66</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PSI</td>
<td>A</td>
<td>101.82</td>
<td>19.57</td>
<td>2.77</td>
<td>.008**</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>87.46</td>
<td>17.95</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SSNI</td>
<td>A</td>
<td>2.83</td>
<td>.94</td>
<td>-1.25</td>
<td>.214</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>3.09</td>
<td>61</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Indicates significance at the p<.05 level, ** indicates significance at the p<.01 level.

T-tests were conducted on the psychometric measures taken at pre test to assess the degree of similarity between those who were on a 50 mg and above and below 50mg dose of antidepressant. On most pre-test measures, such as depression, anxiety, parenting
stress and social support there was no significant difference between those on a 50 mg and above dose and those on below 50mg dose. However, those on a 50 mg and above dose scored significantly higher on the Dyadic Adjustment Scale, indicating significantly greater relationship adjustment and satisfaction than those on a below 50 mg dose of antidepressant (see Table 4.6 below).

4.2.6 INVESTIGATION OF THE RELATIONSHIP BETWEEN WOMEN’S MEDICATION LEVELS AND THEIR PARTNER’S DEPRESSION SCORES

As a follow on from the result of a significant difference found in women taking 50 mg and above doses of medication and having higher relationship adjustment scores, it was decided to further investigate the relationship between medication doses and the depression scores of male partners to determine whether a similar pattern would emerge, that is, would women on 50 mg and above doses have partners with lower depression scores? For women who were taking antidepressant medication at pre intervention medication dosages (mg) were correlated with the BDI-II scores of their partners using a Pearson's product moment correlation coefficient. No significant relationship existed between medication dose and men's depression score pre intervention, r=.514 ( p=.09, ns).

Table 4.6: T-Tests on pre intervention psychometric measures for subjects using 50 mg and above (n=12) and below 50 mg (n=14) dosage antidepressants at pre test.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Dosage</th>
<th>Mean</th>
<th>SD</th>
<th>t-values (df=18)</th>
<th>Sig. (2 tail)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPDS</td>
<td>=&gt;50mg</td>
<td>18.12</td>
<td>3.8</td>
<td>-.067</td>
<td>.947</td>
</tr>
<tr>
<td></td>
<td>&lt;50mg</td>
<td>18.25</td>
<td>4.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BDI-II</td>
<td>=&gt;50mg</td>
<td>28.5</td>
<td>6.67</td>
<td>-.641</td>
<td>.530</td>
</tr>
<tr>
<td></td>
<td>&lt;50mg</td>
<td>31.1</td>
<td>9.96</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BAI</td>
<td>=&gt;50mg</td>
<td>17.87</td>
<td>7.16</td>
<td>-.267</td>
<td>.729</td>
</tr>
<tr>
<td></td>
<td>&lt;50mg</td>
<td>19.33</td>
<td>14.18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DAS</td>
<td>=&gt;50 mg</td>
<td>111.9</td>
<td>18.56</td>
<td>2.203</td>
<td>.041*</td>
</tr>
<tr>
<td></td>
<td>&lt;50mg</td>
<td>93.0</td>
<td>18.90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PSI</td>
<td>=&gt;50mg</td>
<td>105.5</td>
<td>16.86</td>
<td>.923</td>
<td>.368</td>
</tr>
<tr>
<td></td>
<td>&lt;50mg</td>
<td>97.08</td>
<td>21.71</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SSNI</td>
<td>=&gt;50mg</td>
<td>2.97</td>
<td>.103</td>
<td>.612</td>
<td>.548</td>
</tr>
<tr>
<td></td>
<td>&lt;50mg</td>
<td>2.71</td>
<td>.89</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Indicates significance at the p<.05 level.
4.2.7 CHARACTERISTICS OF SUBGROUPS THAT MADE UP THE INTERVENTION GROUPS

As indicated in the method section, the 'group partners involved' and 'group women only' interventions were run several times in order to obtain sufficient numbers for each cell. Because the intervention being tested was a group format, it was not ethically or practically possible to assign any more than 8 subjects to each group. Thus, for the intervention 'group partners involved', 2 subgroups (n=6, n=8) made up this intervention. For the intervention group 'women only', 3 subgroups made up the final group. In order to legitimately combine these subgroups, the subgroups were compared on all demographic and pre intervention measures. Subgroups 1 and 2 did not differ significantly on any of the categorical demographic variables, prior to the intervention (see Table 4.50 in appendix 22).

Table 4.7: T-tests comparing demographic variables of subgroup 1 and subgroup 2 participants

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group</th>
<th>Mean</th>
<th>SD</th>
<th>t-values (df=12)</th>
<th>Sig. (2 tail)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>1</td>
<td>28.00</td>
<td>3.2</td>
<td>-.665</td>
<td>.519</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>29.25</td>
<td>3.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of children</td>
<td>1</td>
<td>2.17</td>
<td>1.2</td>
<td>.278</td>
<td>.786</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>2.0</td>
<td>1.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Breast feeding experience</td>
<td>1</td>
<td>2.17</td>
<td>.98</td>
<td>.325</td>
<td>.751</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>2.0</td>
<td>.92</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Support given by partner</td>
<td>1</td>
<td>2.17</td>
<td>.75</td>
<td>1.610</td>
<td>.135</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>1.62</td>
<td>.52</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Support given by family/friends</td>
<td>1</td>
<td>1.83</td>
<td>.41</td>
<td>.812</td>
<td>.433</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>1.62</td>
<td>.52</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mother's health after birth</td>
<td>1</td>
<td>1.33</td>
<td>.52</td>
<td>-2.93</td>
<td>.013*</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>2.37</td>
<td>.74</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mother's health in pregnancy</td>
<td>1</td>
<td>1.17</td>
<td>.41</td>
<td>-1.135</td>
<td>.279</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>1.62</td>
<td>.91</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infant's health after birth</td>
<td>1</td>
<td>1.5</td>
<td>.84</td>
<td>1.150</td>
<td>.273</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>1.12</td>
<td>.35</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceptions of bonding with infant</td>
<td>1</td>
<td>1.67</td>
<td>.52</td>
<td>-1.431</td>
<td>.178</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>2.25</td>
<td>.88</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Indicates significance at the p< 0.05 level
Table 4.8: ANOVAs comparing demographic variables of the subgroups 3, 4 and 5

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group</th>
<th>Mean</th>
<th>SD</th>
<th>F- values</th>
<th>Df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>3</td>
<td>29.6</td>
<td>5.2</td>
<td>.961</td>
<td>(2, 13)</td>
<td>.408</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>30.4</td>
<td>4.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>26.8</td>
<td>3.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of children</td>
<td>3</td>
<td>2.2</td>
<td>1.3</td>
<td>.191</td>
<td>(2, 13)</td>
<td>.828</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>1.8</td>
<td>.83</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>2.0</td>
<td>.89</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Breast feeding experience</td>
<td>3</td>
<td>2.2</td>
<td>.83</td>
<td>.284</td>
<td>(2, 13)</td>
<td>.757</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>2.4</td>
<td>.54</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>1.83</td>
<td>1.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Support given by partner</td>
<td>3</td>
<td>1.8</td>
<td>.44</td>
<td>.858</td>
<td>(2, 13)</td>
<td>.446</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>2.4</td>
<td>.89</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>1.8</td>
<td>.98</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Support given by family/friends</td>
<td>3</td>
<td>1.6</td>
<td>.55</td>
<td>.769</td>
<td>(2, 13)</td>
<td>.483</td>
</tr>
<tr>
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<td>4</td>
<td>2.2</td>
<td>.11</td>
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<tr>
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<td>5</td>
<td>1.7</td>
<td>.82</td>
<td></td>
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</tr>
<tr>
<td>Mother's health during pregnancy</td>
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<td>1.8</td>
<td>.84</td>
<td>.722</td>
<td>(2, 13)</td>
<td>.504</td>
</tr>
<tr>
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<td>.71</td>
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<tr>
<td></td>
<td>5</td>
<td>1.5</td>
<td>.55</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Mother's health after pregnancy</td>
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<td>1.2</td>
<td>.45</td>
<td>1.32</td>
<td>(2, 13)</td>
<td>.300</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>1.8</td>
<td>.45</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>1.7</td>
<td>.82</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infant's health after birth</td>
<td>3</td>
<td>1.4</td>
<td>.55</td>
<td>2.84</td>
<td>(2, 13)</td>
<td>.095</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>1.8</td>
<td>.84</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>1.0</td>
<td>.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceptions of bonding with infant</td>
<td>3</td>
<td>1.6</td>
<td>.55</td>
<td>6.691</td>
<td>(2, 13)</td>
<td>.010**</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>2.2***</td>
<td>.44</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>1.2***</td>
<td>41</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Significant at the p<.05 level, **indicates significance at the p<.01 level. *** Means that are significantly different from each other using Tukey HSD post hoc analysis.

On the continuous demographic variables only one significant difference was found, within the category of mother's health post delivery (see Table 4.7). Subgroup 2 subjects reported to be in significantly poorer health post delivery than those in subgroup 1. Given the similarity found between these 2 subgroups on a host of other variables, it was regarded as
a reasonable assumption that this difference could be expected to have occurred by chance. Subgroups were then compared on the pre-intervention psychometric measures, EPDS, BDI-II, BAI, SSNI, PSI, and the DAS, and no significant differences were found indicating strong similarity prior to intervention (see Table 4.51 appendix 22).

Subgroups 3, 4 and 5 consisted of n= 5, n=5 and n=6, respectively. These subgroups made up the intervention 'women only' group. Again, these subgroups were assessed for similarity on the demographic variables and psychometric variables obtained prior to the intervention no significant differences were obtained for any of the categorical demographic variables between each of the 3 subgroups (see appendix 22, Table 4.52).

ANOVA's were performed on the continuous variables and pre-intervention EPDS, BDI-II, BAI, SSNI and DAS scores of the three subgroups. One significant difference on demographic variables emerged, within the category of 'perceptions of bonding'. For subgroup 4 and 5, subgroup 4 participants rated themselves as significantly more negative in their perceptions of bonding with their infant than subgroup 5. On the pre-intervention psychometric measures (see Table 4.8 above), significant differences were obtained between the subgroups on the EPDS, BAI and SSNI. Pre-intervention differences were found between subgroup 4 and 5 on the EPDS, with subgroup 5 having significantly lower scores pre-intervention than subgroup 4. Subgroup 4 indicated significantly lower levels of social support than subgroup 3 or 5. Lastly, subgroup 4 was significantly higher in anxiety scores than subgroup 3 or 5 (see Table 4.9).

Due to the patterning of significant differences associated with subgroup 4 on crucial measures of depression, anxiety, levels of social support it was decided to eliminate this subgroup from the main analysis, thus reducing the cell size of the 'group women only' to 11.

Descriptive statistics were revised to incorporate this change and are presented in Tables 4.54, 4.55 in appendix 22. As indicated the mean age for the women in group 'women only' has reduced slightly to 28.1 years. More women were married in the group (82%), making this the highest marriage rate amongst the groups. The occupational profile for this group altered; sales/administration and homemakers are the two most highly nominated occupations. Thirty six percent of women in this group have one child only, with the majority
continuing to be under 6 months of age (91%). The number of women reporting traumatic births reduced slightly to 36% of the group; with hypertension being the most commonly reported type of trauma (27%). The mother's self reported health during pregnancy improves with the elimination of subgroup 4, to almost half the group reporting 'good' health during pregnancy.

Table 4.9: ANOVAs on pre-intervention psychometric measures for subgroups 3, 4 and 5 group women only.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Group</th>
<th>Mean</th>
<th>SD</th>
<th>F-values</th>
<th>Df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPDS</td>
<td>3</td>
<td>19</td>
<td>3.9</td>
<td>4.62</td>
<td>(2, 13)</td>
<td>.030*</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>21.4***</td>
<td>3.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>15.3***</td>
<td>3.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BDI-II</td>
<td>3</td>
<td>25.8</td>
<td>8.7</td>
<td>1.38</td>
<td>(2, 13)</td>
<td>.286</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>31.4</td>
<td>13.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>21.7</td>
<td>6.6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BAI</td>
<td>3</td>
<td>14.6</td>
<td>8.6</td>
<td>6.23</td>
<td>(2, 13)</td>
<td>.013*</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>23.6***</td>
<td>10.6</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>5</td>
<td>6.5***</td>
<td>4.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DAS</td>
<td>3</td>
<td>108.6</td>
<td>23.7</td>
<td></td>
<td>(2, 13)</td>
<td>.455</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>92.2</td>
<td>21.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>104</td>
<td>17.9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PSI</td>
<td>3</td>
<td>106.4</td>
<td>14.9</td>
<td></td>
<td>(2, 13)</td>
<td>.069</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>104.6</td>
<td>26.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>76.8</td>
<td>20.7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SSNI</td>
<td>3</td>
<td>3.26***</td>
<td>.51</td>
<td></td>
<td>(2, 13)</td>
<td>.002**</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>1.68***</td>
<td>.77</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>3.27***</td>
<td>.59</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Significant at the p<.05 level, ** indicates significance at the p<.01 level. *** Means that are significantly different from each other using Tukey HSD post hoc analysis.

Similarly, mother's health after the birth and reported infant's health improved with the elimination of subgroup 4 from the analysis as indicated by reduced means (where the lower the score the better the health). Perceptions of bonding improve with almost 2/3 of the group reporting 'positive' bonding experiences with their infant, compared with less than half with subgroup 4 included. Breast-feeding experience and support given by partner also improved with 36% of the group rating these as 'good'.
Fifty-five percent of the group recorded a previous history of depression and 18% reported antenatal depression, increasing comparability with the other experimental groups. Fewer women recorded a family history of depression, anxiety or previous counselling (64% and 9%, respectively). Only 27% of the sample reported using antidepressant medication prior to intervention. The vast majority of the sample reported the onset of their depression as occurring in the first 6 months post partum (91%).

With subgroup 4 removed from the 'group women only' the subgroup 3 and 5 are very similar on all demographic variables pre intervention with no significant differences being found (see appendix 22, Tables 4.54 - 4.58). Similarly with the exception of the PSI scores, the groups have no significant differences on the psychometric measures (see Table 4.10). A significant difference was obtained for PSI scores with subgroup 3 having higher mean stress score than subgroup 5 (t (9)=2.658, p<.05). Given that these groups have proven to be similar on the large number of other measures taken, particularly depression measures, it was considered appropriate to combine these subgroups.

Table 4.10: T-Tests on Pre intervention psychometric measures for subgroup 3 and 5 for group women only.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Group</th>
<th>Mean</th>
<th>SD</th>
<th>t-values (df =9)</th>
<th>Sig. (2 tail)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPDS</td>
<td>3</td>
<td>19</td>
<td>3.94</td>
<td>1.753</td>
<td>.113</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>15.3</td>
<td>3.01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BDI-II</td>
<td>3</td>
<td>25.8</td>
<td>8.75</td>
<td>.894</td>
<td>.393</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>21.7</td>
<td>6.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BAI</td>
<td>3</td>
<td>14.6</td>
<td>8.62</td>
<td>2.051</td>
<td>.070</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>6.5</td>
<td>4.13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DAS</td>
<td>3</td>
<td>108.6</td>
<td>23.37</td>
<td>.370</td>
<td>.720</td>
</tr>
<tr>
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<td>5</td>
<td>104.0</td>
<td>17.92</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PSI</td>
<td>3</td>
<td>106.4</td>
<td>14.97</td>
<td>2.658</td>
<td>.03*</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>76.8</td>
<td>20.68</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SSNI</td>
<td>3</td>
<td>3.26</td>
<td>.51</td>
<td>-.020</td>
<td>.985</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>3.27</td>
<td>.58</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Subsequent analyses were performed on all experimental groups including the revised n=11 group 'women only' and the control group, revealing no significant differences on any
of the demographic or psychometric measures between the groups pre-intervention (see Tables 4.57- 4.58 in appendix 22).

4.2.8 DESCRIPTIVE STATISTICS FOR THE MEN IN THE STUDY

Due to the need to run groups more than once to obtain sufficient numbers for each treatment cell, the men's group was conducted twice. The first time it was run, the group consisted of 5 partners of women in subgroup 1. These men formed the men's subgroup 1. The men's subgroup 2 (n=8) was formed of the partners of participants in the second round of treatment. In order to combine these subgroups into one men's group, it was necessary to assess their pre group differences on demographic and pre intervention measures. Results indicated no significant differences between the subgroups on any of the variables of interest, thus providing a solid basis for combining these subgroups (see appendix 22, Tables 4.59 & 4.60).

4.2.9 COMPARISON BETWEEN MEN INVOLVED IN INTERVENTION AND THE CONTROL GROUP

Comparisons of demographic information and psychometric measures were conducted between the men who completed the group programme and the men who acted as a control group to assess degree of similarity pre-intervention.

Table 4.11: T-tests on pre intervention psychometric measures for men’s group and control group subjects

<table>
<thead>
<tr>
<th>Measure</th>
<th>Group</th>
<th>Mean</th>
<th>SD</th>
<th>f-values (df=27)</th>
<th>Sig. (2 tail)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BDI-II</td>
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<td>14.76</td>
<td>6.82</td>
<td>3.825</td>
<td>.001**</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>6.75</td>
<td>4.42</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DAS</td>
<td>1</td>
<td>99.69</td>
<td>16.25</td>
<td>-.986</td>
<td>.333</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>105.5</td>
<td>15.38</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PSI</td>
<td>1</td>
<td>84.46</td>
<td>15.57</td>
<td>1.607</td>
<td>.120</td>
</tr>
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<td></td>
<td>2</td>
<td>74.44</td>
<td>17.55</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SSNI</td>
<td>1</td>
<td>2.892</td>
<td>.916</td>
<td>.729</td>
<td>.473</td>
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<tr>
<td></td>
<td>2</td>
<td>2.63</td>
<td>.99</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

** Significant at the p<.01 level. NB: Group 1 = men's experimental group, Group 2 = control.
Tests indicated that there were no significant differences between the control and experimental groups on demographic variables or on parenting stress, level of social support and marital or relationship satisfaction (see appendix 22, Tables 4.61- 4.63). There was a significant difference, however, on scores of depression, with men in the experimental groups scoring higher on the BDI-II than the control group. It seems plausible that this difference may be a self-reporting artifact, where men in the men's group would be more likely to honestly report depressive symptoms as they had begun to form a therapeutic relationship with the researcher. The control group may have been under-reporting due to response bias that has previously been noted, particularly in male samples (Beck et al., 1996). These results are presented Table 4.11 above.

4.2.10 COMPARISON BETWEEN MEN IN STUDY AND NORMATIVE POPULATION FOR STANDARDIZED MEASURES

Pre intervention BDI-II (Beck et al.,1996) scores for the men in this sample indicate that the control group fits the profile for a non-depressed or minimal level of depression, whilst the mean BDI-II score for the men involved in the intervention falls in the mild depression range.

The men in this sample scored lower mean levels of social support than those of the standardization sample of students provided by Flaherty et al.(1983), where the mean total SSNI score for men was 3.92. In comparison with members of a religious community the men in this sample also scored lower on social support, 4.44 versus a total mean of 2.75.

In terms of relationship adjustment, in comparison with normative data, this sample of men, like the women, fell into the category of 'slightly below average' to 'average' relationship functioning, which is to be expected given that one member of the partnership was depressed at the time the measures were taken.

For the men involved in the intervention, at pre test their total mean parenting stress scores fell just below the 85th percentile, suggesting they were experiencing some clinical elevation of parenting stress. The control men were just above the 60th percentile, suggesting better overall parenting adjustment than the experimental group. Although, as noted above, the differences between the two groups was not significant.
4.3 STATISTICAL PROCEDURES

The current study aimed to evaluate the effects of various CBT interventions on levels of depression, anxiety, parenting stress, relationship satisfaction or adjustment and social support at three testing points, immediately post intervention, at 3 months and at 6 months follow-up.

All data analysis was conducted using SPSS Version 10.0 for Windows. The main analysis was conducted using multiple univariate analyses of covariance (ANCOVAs) on the outcome measures at posttest, 3-months and 6-months follow-up for both women and men. Scores on the psychometric measures taken pre-intervention were entered as the covariate. Thus each ANCOVA performed had one covariate, its own pretest score.

ANCOVA was favored over a mixed design ANOVA or SPANOVA, using time as a main effect, or analyses based on difference or relative change scores, for several reasons. Firstly, ANCOVA is recommended for pre-test post-test designs where regression towards the mean is an important consideration. This effect is important particularly in clinical studies where subjects' participation is based wholly or in part on baseline pretest scores (Bonate, 2000).

Secondly, ANCOVA is recommended when baseline non-comparability between experimental groups is suspected (Bonate, 2000). Within this study although no significant differences were found between the experimental and control groups on pre-test measures, significant differences were found between subgroups and as pre-test means show, the experimental and control groups were not identical on all these measures.

Thirdly, ANCOVA is appropriate when it is possible that the pretest measures have some influence on the posttest measures, which is the case in the present study. Strong significant correlations were found between pre test and outcome measures for most measures in this study over the 3 testing periods (see appendix 22, Tables 4.64 - 4.67).

Fourthly, ANCOVA is considered to be a more powerful test than ANOVA, particularly when unequal sample sizes are used and it is more robust to violations of assumptions of
normality and homogeneity of variance than ANOVA (Bonate, 2000). Lastly, ANCOVA is recommended when strict random assignment to treatment groups is impossible, as is often the case in community-based research to deal with pre intervention differences (Tabachnick & Fiddell, 1989).

Unequal sample sizes were dealt with utilizing the unweighted means approach (Tabachnick & Fiddell, 1989). Adjusted means are provided in italics in subsequent Tables 4.12 and 4.14.

Multiple ANCOVAs rather than MANCOVAs were performed as per recommendations of Huberty and Morris (1989). To begin with, the current study had four specific hypotheses relating to change at three different times, thus it was considered appropriate to examine these using separate ANCOVAs. Secondly, the research being conducted is exploratory in nature, with new treatments being examined. Thirdly, previous studies have utilized multiple ANOVAs or t-tests, thus facilitating possible comparisons (Fleming et al., 1992; Meager & Milgrom, 1996; Misri, Kostaras, Fox & Kostaras, 2000; Rowe et al., 1996; Spinelli, 1997).

A drawback of the ANCOVA method is the high familywise error rate associated with performing several ANCOVAs at the .05 level, significant results are therefore interpreted with caution.

4.4 DATA SCREENING

The entire sample data was screened for outliers at pre, post, 3-month and 6-month follow-up on each of the outcome measures of depression, anxiety, parenting stress, social support and marital or relationship satisfaction (Tabachnick & Fiddell, 1989). All data entered was carefully checked visually for data entry errors. Data was screened for univariate outliers using both boxplots and calculation of z scores for the data set, z scores greater than +3 and less than -3 were considered to be outliers (Coakes & Steede, 2001; Tabachnick & Fiddell, 1989). Six participants obtained z scores outside the above cut-offs. Five of these participants belonged to subgroup 4 and hence were eliminated with that group from the main analysis. The remaining outlier was a member of the individual intervention whose post intervention BDI-II, although improved was still higher than the rest
of the sample. This individual was retained. The presence of multivariate outliers was
tested using the Mahalanobis distances for the entire data set. No multivariate outliers were
detected.

At the 3 and 6-month post testing, three male subjects had missing data and at 6-month
posttest three female subjects omitted to return their data. Group means were substituted
for these missing values (Tabachnick & Fiddell, 1989).

4.5 POWER ANALYSIS
According to Cohen (1988, 1992) in order to have an 80% chance of showing a large
difference between means at the 0.05% level cell sizes of 18 subjects are required.
Accordingly, in the study the chance of detecting differences between the means was only
moderate due to cell sizes not reaching the optimal numbers. Power calculations for each
ANCOVA performed are presented in Table 4.68 in appendix 22.

Partial Eta squared calculations for each ANCOVA conducted are presented in Table 4.69
in appendix 22. The Eta squared figures indicate the strength of the relationship between
the covariate and the dependent variable, or how much of the variance is accounted for by
the covariate. As indicated in Table 4.69 in general the strength of the relationship between
the covariate and the dependent variable (respective psychometric measures) was very
strong for the ANCOVAs conducted. The lowest value obtained occurred between the pre
BDI-II measure and the 3-month post BDI-II measure for women where .12 or 12% of the
variance was accounted for by the pretest result.

4.6 ASSUMPTION TESTING
Assumptions of homogeneity of variance for the ANOVAs and t-tests performed on the pre
intervention measures detailed above were all examined using Levene's test of
homogeneity of variance. All probabilities obtained were greater than 0.05, thus meeting
the assumption of homogeneity of variance.

Assumptions of normality were explored for the pre, post, 3- and 6-month data set as a
whole using histograms, normal probability plots and the Kolmogorov-Smirnov statistic with
a Lilliefors significance level and the Shapiro-Wilks statistic. There were some departures
from normality found for the women's data on different measures over different testing periods. Due to the fact that the current sample is a subgroup of the normal population, departures from normality were to be expected and, in fact, are normal for this group of women. Additionally, no single transformation could be applied to normalize the data, and transformation would impede understanding of the scaling used on the outcome measures (Tabachnick & Fiddell, 1989). Thus the ANCOVAs were performed on untransformed data.

At posttest, 3-months and 6-months follow-up, inspection of scatterplots (see appendix 24) revealed reasonably linear relationships between dependent variables and their covariates (pre-test scores) for experimental and control groups. The slopes of the regression lines were similar across groups, suggesting homogeneity of regression slopes.

Homogeneity of variances were assessed using Levene's test at the .05 level. Posttest homogeneity of variance was violated on the women's 6-month SSNI results, the men's 6-month SSNI results and post BDI results. On these occasions the more stringent value of 0.025 was applied, although this did not alter findings (Keppel, 1991). Elsewhere an alpha level of 0.05 was used.

4.7 HYPOTHESIS TESTING OR MAIN ANALYSIS

4.7.1 HYPOTHESIS ONE
The first hypothesis predicted that the women in experimental groups, receiving any form of structured intervention, would obtain significantly better posttest scores on depression, anxiety, parenting stress, dyadic adjustment and levels of social support than women in the control group.

For all measures this could only be assessed at pre-test and posttest, as this was the only information available from the women's control group. Each component of the hypothesis will be dealt with separately.

Depression levels at posttest
Depressive symptoms were measured in this study by both the EPDS and the BDI-II. For depression, the results illustrated in Table 4.13 indicate that hypothesis 1 was upheld. After the differences between the pre test scores for the groups have been eliminated, there is a significant difference at the p<.01 level between all groups receiving intervention and the control group at posttest on both the EPDS and the BDI-II; $F(3, 36)=24.57$, p<0.01 and $F(3, 36)=25.34$, p<0.01 respectively. Perusal of the means in Table 4.12 shows that the mean depression scores reduced for women in the intervention groups, and remained relatively unchanged for the women in the control group at posttest. This is reinforced by the paired comparison tests conducted between groups provided in Table 4.14, Group 4 (control) was significantly different to groups 1, 2 and 3, when Bonferroni adjustments were made to control for elevated Type I error on both the depression scales. Figure 4.1 clearly shows large differences in pre and post EPDS scores between control and intervention groups.

Paired t-tests were conducted on individual groups over time to assess within group differences, as recommended by Green, Salkind and Akey, 2000. Table 4.14 shows that the changes in means seen in all 3 intervention groups are statistically significant, for group 1 (group partners involved) $t(13)= 12.64$, p<0.01, group 2 (group women only) $t(10)=9.3$, 

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p<0.01, group 3 (individual) t(8)=7.8, p<0.01, whilst no significant difference was found on pre vs. post scores within group 4.

Table 4.12: Means and standard deviations for all 4 women’s groups at pre, post, 3 and 6-month follow-up (adjusted means are shown in italics).

| Measure | Group | Pre test | | Post test | | 3 months | | 6 months |
|---------|-------|----------|----------|----------|----------|----------|----------|
|         |       | Mean     | SD       | Mean     | SD       | Mean     | SD       |
| EPDS    | 1     | 16.9     | 3.5      | 6.2      | 2.6      | 5.9      | 3.4      |
|         |       | (6.2)    |          | (5.8)    |          | (5.8)    |          |
|         | 2     | 17.0     | 3.8      | 5.2      | 3.4      | 6.4      | 5.5      |
|         |       | (5.1)    |          | (6.4)    |          | (6.4)    |          |
|         | 3     | 16.2     | 3.2      | 8.0      | 2.3      | 6.1      | 3.3      |
|         |       | (8.2)    |          | (6.2)    |          | (6.1)    |          |
|         | 4     | 16.7     | 4.1      | 15.4     | 3.7      |
|         |       | (15.5)   |          |          |          |
| BDI-II  | 1     | 29.0     | 7.9      | 9.9      | 6.0      | 8.5      | 4.1      |
|         |       | (8.7)    |          | (8.7)    |          | (7.7)    |          |
|         | 2     | 23.5     | 7.5      | 7.7      | 5.1      | 8.5      | 7.6      |
|         |       | (8.6)    |          | (9.2)    |          | (9.2)    |          |
|         | 3     | 24.1     | 6.4      | 10.5     | 4.3      | 10.5     | 4.7      |
|         |       | (11.3)   |          | (11.0)   |          | (12.3)   |          |
|         | 4     | 25.1     | 7.7      | 25.0     | 6.8      |
|         |       | (25.3)   |          |          |          |
| BAI     | 1     | 19.1     | 13.0     | 7.6      | 6.4      | 5.6      | 4.3      |
|         |       | (5.8)    |          | (4.2)    |          | (4.2)    |          |
|         | 2     | 10.2     | 7.5      | 3.4      | 2.8      | 4.6      | 6.1      |
|         |       | (5.3)    |          | (5.8)    |          | (5.8)    |          |
|         | 3     | 11.7     | 7.9      | 5.9      | 5.4      | 5.8      | 3.9      |
|         |       | (7.2)    |          | (6.6)    |          | (6.6)    |          |
|         | 4     | 17.6     | 12.1     | 15.8     | 9.8      |
|         |       | (14.7)   |          |          |          |
| PSI     | 1     | 95.1     | 17.1     | 85.6     | 17.1     | 78.2     | 18.4     |
|         |       | (83.9)   |          | (76.7)   |          | (77.8)   |          |
|         | 2     | 90.3     | 23.3     | 68.4     | 14.9     | 67.1     | 23.1     |
|         |       | (69.9)   |          | (68.2)   |          | (63.3)   |          |
|         | 3     | 90.4     | 17.1     | 80.7     | 16.4     | 79.0     | 17.1     |
|         |       | (82)     |          | (80.0)   |          | (88.0)   |          |
|         | 4     | 92.6     | 18.9     | 97.1     | 16.9     |

159
<table>
<thead>
<tr>
<th></th>
<th>DAS</th>
<th></th>
<th></th>
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<td>15.9</td>
<td>106.8</td>
<td>12.8</td>
<td>106.6</td>
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<td></td>
<td>(109.6)</td>
<td>(108.8)</td>
<td>(106.3)</td>
<td>(111.4)</td>
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</tr>
<tr>
<td>2</td>
<td>106.1</td>
<td>19.6</td>
<td>114.7</td>
<td>16.9</td>
<td>110.4</td>
<td>17.2</td>
<td>110.4</td>
</tr>
<tr>
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<td>(110.1)</td>
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<td>(101.5)</td>
<td>(106.3)</td>
<td>(107.4)</td>
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<td>97.6</td>
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<td>(101)</td>
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<td>(99.6)</td>
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</tr>
<tr>
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<td>3.5</td>
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<td>(3.5)</td>
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<td>(3.6)</td>
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<td>.53</td>
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<td>(3.4)</td>
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<td>2.9</td>
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<tr>
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<td>(3.1)</td>
<td></td>
<td>(3.1)</td>
<td>(3.1)</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

NB: Group 1 = group partner involved; group 2 = women only group; group 3 = individual; group 4 = control

Table 4.13: ANCOVAs performed on women’s posttest, 3 and 6 month follow-up measures with pretest measures entered as covariates.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Ancova on posttest</th>
<th>Ancova on 3 month</th>
<th>Ancova on 6 month</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPDS</td>
<td>F(3, 36)=24.57, p&lt;0.01</td>
<td>F(2, 30)=.049, p=.95</td>
<td>F(2, 30)=1.83, p=.18</td>
</tr>
<tr>
<td>BDI-II</td>
<td>F(3, 36)=25.34, p&lt;0.01</td>
<td>F(2, 30)=.998, p=.38</td>
<td>F(2, 30)=3.86, p&lt;0.05</td>
</tr>
<tr>
<td>BAI</td>
<td>F(3, 36)=7.83, p&lt;0.01</td>
<td>F(2, 30)=.899, p=.418</td>
<td>F(2, 30)=6.79, p&lt;0.01</td>
</tr>
<tr>
<td>PSI</td>
<td>F(3, 36)=8.34, p&lt;0.01</td>
<td>F(2, 30)=1.33, p=.28</td>
<td>F(2, 30)=5.62, p&lt;0.01</td>
</tr>
<tr>
<td>DAS</td>
<td>F(3, 36)=5.16, p&lt;0.01</td>
<td>F(2, 30)=1.55, p=.23</td>
<td>F(2, 30)=9.73, p&lt;0.01</td>
</tr>
<tr>
<td>SSNI</td>
<td>F(3, 36)=2.29, p=.094</td>
<td>F(2, 30)=3.6, p&lt;0.05</td>
<td>F(2, 30)=1.38, p=.265</td>
</tr>
</tbody>
</table>

Anxiety levels at posttest

Anxiety levels were measured using the BAI. Again, hypothesis 1 was upheld. A significant difference was found between the experimental and control groups at post test once the pretest differences had been controlled for (F(3, 36)=7.83, p<0.01). Table 4.12, shows that anxiety levels decreased between pre and posttest for groups 1, 2 and 3, whilst they remained stable for group 4. Paired comparisons conducted with Bonferroni adjustment.
show that these differences in pre and post test means are significantly different at the 0.01% level for group 1 and 4 and 2 and 4, and at the 0.05% between group 3 and 4.

Table 4.14: Significant differences at each testing time between groups using Bonferroni adjustment unless otherwise indicated.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Groups significant at posttest</th>
<th>Groups significant at 3 months</th>
<th>Groups significant at 6 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPDS</td>
<td>1+4, p&lt;0.01</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>2+4, p&lt;0.01</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3+4, p&lt;0.01</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2+3, P&lt;0.05</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BDI-II</td>
<td>1+4, p&lt;0.01</td>
<td>None</td>
<td>1+3, p&lt;0.05</td>
</tr>
<tr>
<td></td>
<td>2+4, p&lt;0.01</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3+4, P&lt;0.01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BAI</td>
<td>1+4, p&lt;0.01</td>
<td>None</td>
<td>1+3, p&lt;0.01</td>
</tr>
<tr>
<td></td>
<td>2+4, p&lt;0.01</td>
<td></td>
<td>2+3, p&lt;0.05</td>
</tr>
<tr>
<td></td>
<td>3+4, p&lt;0.05</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PSI</td>
<td>1+2, p&lt;0.05</td>
<td>None</td>
<td>2+3, p&lt;0.01</td>
</tr>
<tr>
<td></td>
<td>2+4, p&lt;0.01</td>
<td></td>
<td>1+2, p&lt;0.05 (LSD)</td>
</tr>
<tr>
<td></td>
<td>1+4, P&lt;0.05 (LSD)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3+4, P&lt;0.05 (LSD)</td>
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</tr>
<tr>
<td>DAS</td>
<td>1+4, p&lt;0.05</td>
<td>None</td>
<td>1+3, p&lt;0.01</td>
</tr>
<tr>
<td></td>
<td>2+4, p&lt;0.05</td>
<td></td>
<td>1+2, p&lt;0.05</td>
</tr>
<tr>
<td>SSNI</td>
<td>1+4, p&lt;0.05 (LSD)</td>
<td>1+2, p&lt;0.05</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>2+4, p&lt;0.05 (LSD)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*LSD = Least Significant Difference adjustment for multiple comparisons.

NB: Group 1 = group partner involved; group 2 = women only group; group 3 = individual; group 4 = control

T-tests presented in Table 4.15, also support this. It is evident that all intervention groups obtained a statistically significant change in BAI scores from pre-test to posttest and follow-up, whilst the control group did not show within group differences. Only group 3’s anxiety levels at 6-months posttest revealed no significant change from their pre-test levels.
Table 4.15: Paired t-tests comparing outcome measures for each group over time.

<table>
<thead>
<tr>
<th>Measure and testing time</th>
<th>Results of paired t-tests</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Group1</td>
</tr>
<tr>
<td>EPDS</td>
<td></td>
</tr>
<tr>
<td>Pre and post</td>
<td>t(13)=12.64, p&lt;0.01</td>
</tr>
<tr>
<td>Pre and 3 months</td>
<td>t(13)=8.9, p&lt;0.01</td>
</tr>
<tr>
<td>Pre and 6 months</td>
<td>t(13)=16.7, p&lt;0.01</td>
</tr>
<tr>
<td>BDI-II</td>
<td></td>
</tr>
<tr>
<td>Pre and post</td>
<td>t(13)=11.8, p&lt;0.01</td>
</tr>
<tr>
<td>Pre and 3 months</td>
<td>t(13)=11.6, p&lt;0.01</td>
</tr>
<tr>
<td>Pre and 6 months</td>
<td>t(13)=12.2, p&lt;0.01</td>
</tr>
<tr>
<td>BAI</td>
<td></td>
</tr>
<tr>
<td>Pre and post</td>
<td>t(13)=4.36, p&lt;0.01</td>
</tr>
<tr>
<td>Pre and 3 months</td>
<td>t(13)=4.8, p&lt;0.01</td>
</tr>
<tr>
<td>Pre and 6 months</td>
<td>t(13)=5.75, p&lt;0.01</td>
</tr>
<tr>
<td>PSI</td>
<td></td>
</tr>
<tr>
<td>Pre and post</td>
<td>t(13)=2.1, p=0.052</td>
</tr>
<tr>
<td>Pre and 3 months</td>
<td>t(13)=3.7, p&lt;0.01</td>
</tr>
<tr>
<td>Pre and 6 months</td>
<td>t(13)=3.0, p&lt;0.01</td>
</tr>
<tr>
<td>DAS</td>
<td></td>
</tr>
<tr>
<td>Pre and post</td>
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</tr>
<tr>
<td>Pre and 3 months</td>
<td>t(13)=3.0, p&lt;0.01</td>
</tr>
<tr>
<td>Pre and 6 months</td>
<td>t(13)=3.2, p&lt;0.01</td>
</tr>
<tr>
<td>SSNI</td>
<td></td>
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<tr>
<td>Pre and post</td>
<td>t(13)=3.6, p&lt;0.01</td>
</tr>
<tr>
<td>Pre and 3 months</td>
<td>t(13)=3.6, p&lt;0.01</td>
</tr>
<tr>
<td>Pre and 6 months</td>
<td>t(13)=2.3, p&lt;0.05</td>
</tr>
</tbody>
</table>

**Parenting stress levels at posttest**

Parenting stress levels were measured using the PSI. A statistically significant difference was found for the main effect of treatment, after the pre test parenting stress levels had been controlled ($F(3, 36)= 8.34$, p<0.01) see Table 4.13. Group means in Table 4.12 show that whilst women in the all intervention groups had lower parenting
stress scores after the intervention, women in the control group had slightly higher scores (92.6 versus 97.1). Paired comparisons in Table 4.14, indicate that the 'women only' group performed significantly better than the control group at posttest. The 'group partner involved' and 'individual' interventions however, were not significantly different from the control group at this time, if we adhere to Bonferroni stricter alpha levels. Using the Least Significance Difference method, groups 1 and 3 are significantly different from group 4 at the p<.05 level. Thus using stricter alpha levels, the hypothesis was partially supported with group intervention for women producing significantly lower parenting stress scores than the control condition.

The t-tests conducted on within group changes reconfirm this. The intervention groups showed significant change from pre test levels on parenting stress at posttest, 3-month and 6-months, with the exception of group 3 whose parenting stress scores were not significantly improved at 6-months.

**Relationship adjustment levels at posttest**

Relationship adjustment or satisfaction was measured using the DAS. The analysis of covariance conducted on treatments resulted in a significant difference being found on post intervention mean DAS scores (F(3, 36)=5.16, p<0.01). Table 4.13 provides the source of this difference. Group 1 and group 2 are significantly different from group 4 at the p<0.05 level at posttest. Table 4.12 illustrates that the means for group 1 and 2 have increased, indicating improved relationship adjustment, whilst the mean for group 4 has remained almost the same after 10-weeks. Hence, the hypothesis was partially supported, intervention in the form of being in a structured CBT group provided statistically significant improvements in relationship functioning when compared to the control condition.

**Social support levels at posttest**

Hypothesis 1 was not supported by the data for levels of social support as measured by the SSNI. No significant differences on level of social support were found between intervention groups and the control group immediately post intervention. In fact, all groups show slight increases in mean social support levels over time. Interestingly, it appears that group 1 and group 2 are approaching significance, if the more liberal LSD method is applied as seen in Table 4.14.
To summarize, hypothesis one was outrightly supported for levels of depression and anxiety. Some support was found for parenting stress and relationship satisfaction levels with group interventions outperforming the control group. Hypothesis one was not upheld for levels of social support. The control group and intervention groups were comparatively equal on levels of social support. Thus, the structured intervention had no added benefit in this area.

4.7.2 HYPOTHESIS TWO
The second hypothesis proposed that women receiving any form of group intervention would obtain significantly better depression, anxiety, parenting stress, dyadic adjustment scores and levels of social support than those receiving individual intervention at post test and follow-up. That is, group therapy would outperform individual therapy.

Depression levels at posttest
As previously discussed, the results of the ANCOVA performed on posttest depression measures indicate that a significant difference does exist between groups for both the BDI-II and EPDS. However, further inspection of the multiple comparison tests conducted to illustrate where the differences lie, suggest that at posttest the only significant difference between treatment groups occurs between group 2 and group 3 on the EPDS. That is, subjects who received the group 'women only' intervention performed significantly better at posttest than the women receiving 'individual' therapy at the p<0.05 level (see Table 4.14).

These findings were not found with the BDI-II, nor did the 'group partner involved' perform significantly better than the 'individual' therapy. Inspection of the group means in Table 4.12 does show what looks to be an improved performance for groups, however, this did not prove to be significant for both groups. Hence, at posttest some support was found for the efficacy of group therapy over individual therapy for improvement in depression.

Depression levels at 3-months
At the 3-month follow-up, the means for group 1 and group 3 decreased and for group 2 slightly increased on the EPDS. Group 1 was the only group where the mean BDI-II, score decreased, signaling improvement. However, the ANCOVA presented in Table 3.13 shows
no significant differences between the 3 intervention groups for either the EPDS or the BDI-II even with pre-test difference controlled for. All three interventions performed similarly providing no support for hypothesis two at 3-months.

**Depression levels at 6-months**
Six months after the 10-week intervention, group 1 and 2 appear, from the means presented in Table 4.12, to be performing the best. That is, they have the lowest depression scores. Table 4.13 shows that after controlling for pre test scores, there is a significant difference in intervention groups at 6-months on the BDI-II ($F(2, 30)=3.86$, $p<0.05$). Table 4.14 shows that this difference lies between group 1 and group 3, with group 1 participants reporting significantly lower mean depression scores (6.8) than group 3 (12.3), providing again, some partial support for the superiority of group over individual treatment for this sample.

**Anxiety levels at posttest**
The BAI posttest means in Table 4.12 suggests that the groups interventions do appear to be obtaining lower anxiety scores than the individual treatment, after adjustment for pre test differences (5.8, 5.3 vs. 7.2). This, however, did not reach significance at the 0.05% using the Bonferroni test of multiple comparisons. All three interventions performed equally at posttest for anxiety reduction, thus, failing to support the hypothesis that group intervention is optimal for reducing anxiety scores.

**Anxiety levels at 3-months**
When anxiety was measured 3-months after the 10-week intervention, slight differences in group means were found (Table 4.12). However, no significant differences between treatments were obtained at this time $F(2, 30)=.899$, $p=.418$.

**Anxiety levels at 6-months**
At 6-months, a significant difference was obtained between the 3 interventions, $F(2, 30)=6.79$, $p<0.01$. Perusal of the multiple comparisons conducted, shows support for hypothesis two. Both group 1 and group 2 significantly outperformed group 3 (individual) at the 6-month follow-up for anxiety.
Parenting stress levels at posttest

Immediately after the intervention, PSI scores proved to be significantly different once pre-test scores had been controlled for, $F (3, 36)=8.34$, $p<0.01$. Further investigation revealed this difference lay between experimental group 2 and control group 4, but also between group 1 and group 2. Group 2 (women only group) performed better, that is, had lower stress scores than group 1 (group partners involved). However, although the means suggest a difference, neither of the groups performed significantly better than individuals at posttest on parenting stress scores, failing to support hypothesis two.

Parenting stress levels at 3-months

Hypothesis two predicts that stress in the parent child system at 3-months post intervention will be significantly reduced in the group inventions, when compared to the individual intervention. ANCOVAs performed on group means using PSI pre-test means as the covariate, indicate no significant difference between interventions. They performed equally well. Parenting stress scores continued to drop at 3-months and were significantly different from pre-intervention scores within groups (see Table 4.14).

Parenting stress levels at 6-months

Significant differences do exist between the 3 interventions at the 6-month follow-up ($F (2, 30)=5.62$, $p<0.01$). This significant difference occurs between groups 2 and 3. Group 2 subjects obtained significantly lower parenting stress scores at 6-months than subjects who received individual intervention. Thus for parenting stress, some support was found for the hypothesis that group intervention would be superior to individual intervention, but only at the 6-month follow-up.

Relationship adjustment levels at posttest

Looking at the group means (Table 4.12), it appears that groups 1 and 2 showed greater increases in relationship satisfaction than group 3. However, this difference was not large enough to be sufficient. Contrary to hypothesis two, relationship adjustment or satisfaction between the 3 intervention groups proved to be statistically no different at posttest. The 3 groups performed equally well (see Table 4.14).
Relationship adjustment levels at 3-months
Again, no support was found for the group interventions outperforming the individual intervention for relationship satisfaction at the 3-month follow-up (see Table 4.14). Interestingly, the means reveal that relationship satisfaction scores for all groups dropped slightly at this testing period.

Relationship adjustment levels at 6-months
However, at the 6-month follow-up, a significant difference was found between the 3 interventions, $F(2, 30)=9.73$, $p<0.01$. This difference occurred between groups 1 and 3 at the $p<.01$ level and between groups 2 and 3 at the $p<.05$ level, thus providing some support for hypothesis two. Over the longer term, groups did outperform individual therapy for relationship improvement. In fact, group 3 relationship adjustment scores dropped to below pre test means after 6-months.

Social support levels at posttest
At posttest, no significant difference was found between any of the interventions on mean levels of social support. Groups 1 and 3 did show within group changes between pre and posttest with increases in reported levels of social support, however this change was not large enough to be significant (see Table 4.13).

Social support levels at 3-months
Three months post intervention a significant difference was found between the groups on SSNI scores ($F(2, 30)=3.6$, $p<0.05$). Further analysis indicated that group 1 and group 2 were significantly different from one another but not from the individual intervention, therefore failing to support hypothesis two.

Social support levels at 6-months
Over time the picture did not change for social support. At the 6-month follow-up, no significant differences were found between groups and individual interventions, thus again failing to support the hypothesis that group intervention would create significantly greater levels of social support than individual.
In short, hypothesis two that groups would show greater improvement than individual intervention was not upheld for levels of social support. Initially the hypothesis was not supported for levels of anxiety and relationship adjustment, but at the 6-month follow-up both groups did better than the individual intervention on these measures. Thus, some time was needed for the benefit to reveal itself in the psychometric measures. Some support for the hypothesis was found for parenting stress levels at 6-months, with group 'women only' outperforming 'individual' intervention. For depression levels, at posttest, the group 'women only' showed greater improvement than 'individual' intervention, whilst at 6-months the group 'group partner involved' showed the greatest reduction in depression levels, again, partially supporting hypothesis two.

4.7.3 HYPOTHESIS THREE
Hypothesis three stated that women receiving the 'group partner involved' intervention will achieve significantly better depression, anxiety, parenting stress, relationship adjustment and social support levels than women who received either the group 'women only' intervention, or the 'individual' intervention. That is, when partners are involved in the treatment, improvements will be greater. Figure 4.2 illustrates the changes on EPDS over time between interventions.

Depression levels at posttest
At posttest, no significant differences were found between 'group partner involved' and the other interventions, upholding the null hypothesis for both measures of depression.

Depression levels at 3-months
Three months after the 10-week intervention, the group means in Table 4.12 do suggest a trend that shows group 1 obtaining lower levels of depression than the other interventions. This did not prove to be significant when tested by ANCOVA.

Depression levels at 6-month
Investigation of the group means in Table 4.12 suggest group 1 is outperforming groups 2 and 3. With further analysis, group 1 did prove to be significantly less depressed than group 3 at the 6-month follow-up, as indicated by lower BDI-II means, showing some support for hypothesis 3. It seems that after controlling for pre test differences, inclusion of partners in
Anxiety levels at 3-months
Even though group means appear to be lowest for group 1, again the difference was not large enough to be significant (see Table 4.13). Group 1 did not perform significantly better at the 3-month follow-up, when compared to group 2 or 3 for anxiety levels.

Anxiety levels at 6-months
At the 6-month follow up, group 1 did outperform group 3 as indicated by significantly lower BAI scores (see Table 4.13). Group 1 did not produce lower anxiety scores than group 2 however, so some qualified support was found for hypothesis 3 at 6-months.

Parenting stress levels at posttest
In terms of parenting stress scores, immediately post the intervention, it was predicted that group 1 would have significantly lower scores than the other groups. In contrast, group 1 had significantly higher parenting stress scores than group 2 at posttest. No significant difference was found between group 1 and group 3, although the means reveal a slightly lower parenting stress score for the individual intervention also (see Table 4.12).

Parenting stress levels at 3-months
Table 4.13 reveals no significant differences between any of the interventions at the 3-month mark. Revision of the means suggest that of all the interventions, group 2 appears to be producing the lowest parenting stress scores. However, this did not prove large enough to be significant.

Parenting stress levels at 6-months
Again at 6-months, group 1 did not perform significantly better than group 2 or group 3 in terms of reduced parenting stress. Group 1 means were lower than group 3 as shown in Table 4.12 but again this was not of sufficient size to be significant. Thus, hypothesis 3 was not supported statistically for levels of parenting stress as measured by the PSI at any assessment point.

Relationship adjustment levels at posttest
Relationship adjustment or satisfaction was one of the main indicators where it was expected that the intervention with partners included would excel above other interventions.
However, at posttest, although it appears from inspection of the means that the group interventions, are doing better, there is no significant difference between interventions thus upholding the null hypothesis.

**Relationship adjustment levels at 3-months**

At 3-months post intervention, similarly, no significant differences were obtained between interventions. Even though the group mean for group 1 was larger, showing greater satisfaction, the difference was not sufficient.

**Relationship adjustment levels at 6-months**

Six months after the 10-week intervention, group 1 significantly outperformed group 2 and 3, showing greater relationship adjustment over time once pre test differences were eliminated, $F(2, 30)=9.73, p<0.01$, providing strong support for the hypothesis at this measurement point.

The t-tests conducted on within group changes, further support these ANCOVA findings. In terms of within group changes over time, only group 1 significantly improved over all 3 testing times. Group 2 significantly improved immediately post intervention but not at 3 and 6-months, and group 3 showed no significant change over time from pretest measures (see Table 4.15).

**Social support levels at posttest**

Hypothesis 3 was not upheld at posttest for levels of social support, contrary to expectations. Group 1 did not perform any differently on social support levels than other interventions, $F(3, 36)=2.29$, $p=.094$.

**Social support levels at 3-months**

Three months later, however, group 1 showed significantly higher levels of social support than did group 2. This result did not extend to group 3. Group 1’s level of social support was not significantly higher than group 3’s. Thus, some partial support was provided for the efficacy of inclusion of partners in treatment.
Social support levels at 6-months

Again, 3 months later, this effect disappeared, the interventions were not significantly different on levels of social support as measured by the SSNI ($F(2, 30)=1.38, \ p=.265$).

Looking at the within group t-tests presented in Table 4.15, group 1 is the only group to show consistent within group change from pre test levels over all testing points, including at 6 months follow-up.

In summary, group 1 did not outperform other interventions across the board as anticipated. Including partners had a significantly positive effect on increasing social support levels at 3-months post intervention. Some support for larger improvements in anxiety and depression levels was found 6-months post intervention, when compared to individual intervention. The most consistent effect was found at the 6-month post intervention point for relationship adjustment and satisfaction. Women in group 1 reported larger improvement in their relationships with their partners than women in other interventions. Inclusion of partners had no significant beneficial effect on parenting stress levels.

4.7.4 HYPOTHESIS FOUR

Hypothesis four pertains to the men who were involved in the study. It was predicted that the men involved in the intervention component of the study would have significantly better levels of depressive symptoms, parenting stress and higher levels of relationship satisfaction and levels of social support than men who acted as controls.

Depression levels at posttest

Table 4.16 provides the group means for the men in the study. It appears that once pre-test scores have been adjusted for, the men who completed the 6-week men's programme obtained lower mean depression scores than the men who acted as controls ($M=4.7$ vs. $8.7$). Greater variation within the group occurred for the experimental group, as indicated by the higher standard deviation, 6.2 compared with 3.5 for the control group. In fact, the control group’s depression score rose marginally from pre-test to posttest. The ANCOVA’s presented in table 3.26 confirm this difference. At posttest men involved in the intervention
obtained significantly lower BDI-II scores than controls ($F(1, 26)=7.03$, $p<0.05$). Figure 4.3 illustrates changes in men's BDI-II scores over time for control and experimental groups.

![Graph showing estimated marginal means over time for treatment and intervention groups](image)

**Figure 4.3:** Mean BDI-II scores at pre (time 1), post (time 2), 3 (time 3) and 6-months (time 4) for the men in the study.

**Depression levels at 3-months**

Although the men's depression scores continued to drop over time, this finding did not hold statistically for the 3-month follow-up. There was no significant difference between men who participated in the 6-week intervention and those who did not, after pre-test differences were accounted for. Thus, hypothesis 4 was unsupported at the 3-month mark (see Table 4.17).

**Depression levels at 6-month**

Six months after the intervention concluded, the means suggest a continual reduction of depressive symptoms in the experimental group (3.1 compared with 6.1). This difference just failed to reach significance at the $p<.05$ level, ($F(1, 26)=3.98$, $p=.057$).
Parenting stress levels at posttest

Mean parenting stress scores in Table 4.16 suggest that men involved in the men's group reported lower parenting stress scores after participating in the group than men who acted as controls (73.1 vs. 81.4). This proved to be a significant difference, $F(1, 26)=6.72$, $p<0.05$, thus supporting the hypothesis that intervention is beneficial to men's stress levels.

Table 4.16: Means and standard deviations for the men's groups at pre, post, 3 and 6 month follow up.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Group</th>
<th>Pre test</th>
<th>Post test</th>
<th>3 months</th>
<th>6 months</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
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</tbody>
</table>

NB: Group 1 = men's group; group 2 = control.

Table 4.17: ANCOVAs performed on men's posttest, 3 and 6 month follow up measures with pretest measures entered as covariates.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Ancova on posttest</th>
<th>Ancova on 3 month</th>
<th>Ancova on 6 month</th>
</tr>
</thead>
<tbody>
<tr>
<td>BDI-II</td>
<td>$F(1, 26)=7.03$, $p&lt;0.05$</td>
<td>$F(1, 26)=3.94$, $p=.058$</td>
<td>$F(1, 26)=3.98$, $p=.057$</td>
</tr>
<tr>
<td>PSI</td>
<td>$F(1, 26)=6.72$, $p&lt;0.05$</td>
<td>$F(1, 26)=18.4$, $p&lt;0.01$</td>
<td>$F(1, 26)=2.75$, $p=.109$</td>
</tr>
<tr>
<td>DAS</td>
<td>$F(3, 36)=2.34$, $p=.138$</td>
<td>$F(1, 26)=.659$, $p=.424$</td>
<td>$F(1, 26)=3.88$, $p=.06$</td>
</tr>
<tr>
<td>SSNI</td>
<td>$F(3, 36)=.35$, $p=.568$</td>
<td>$F(1, 26)=5.51$, $p&lt;0.01$</td>
<td>$F(1, 26)=.63$, $p=.434$</td>
</tr>
</tbody>
</table>
Parenting stress levels at 3-months
This finding continued at the 3-month post intervention mark, the adjusted means for the experimental group being 69.8 compared with 82.4 for the control group. Men in group 1 had significantly lower parenting stress scores than men in the control group, $F(1, 26)=18.4$, $p<0.01$.

Parenting stress at 6-months
In general, over time control group's parenting stress scores remained consistent, whereas the experimental group's scores had lowered considerably. Although the men who completed the 6-week group continued to have lower parenting stress scores at the 6-month follow-up, than the control group, this did not prove to be significant at this assessment point.

Relationship adjustment levels at posttest
The men's means in Table 4.16 show an increase in relationship adjustment for the men who completed the 6-week group. After pre test differences were adjusted for, this was not a large enough difference to be significant. Thus, contrary to the hypothesis, immediately post intervention men in the experimental group did not show a significant benefit.

Relationship adjustment levels at 3-months
Again at the 3-month measurements, mean DAS scores for the men were relatively unchanged (108.5 vs. 105.8) and did not reach significance, failing to support hypothesis four.

Relationship adjustment levels at 6 months
At the final measurement point, the men who completed the group did appear to have greater relationship adjustment scores (111.2 vs. 105.8), however this difference failed to reach significance, $F(1, 26)=3.88$, $p=0.06$.

In general, it appears that men in the control group remained fairly stable on relationship adjustment over time, whilst men in the experimental group improved, as indicated by higher mean scores. This improvement was not always significant, however.
Social support levels at posttest

Very similar scores were found on level of social support post intervention, regardless of whether the men participated in the men's group or not.

Social support levels at 3-months

Three months later, however, the men in the experimental group obtained significantly higher social support scores than those who were controls, $F(1, 26)=5.51$, $p<0.01$ after pretest differences were controlled. This finding upholds the hypothesis of improved levels of social support after participation in intervention (see Table 4.17).

Social support levels at 6-months

At 6-months, although the men in the experimental group had higher levels of social support than their pre intervention levels, some drop occurred between 3 and 6-months follow-up. They were not significantly different from the control group at the 6-month follow-up.

Interestingly, the means indicate that both the experimental and the control groups increased in their level of social support over the measurement period, although the experimental group appears to have a larger increase than the control group (see Table 4.16).

To summarize, some support was found for hypothesis four. Men who participated in the 6-week group programme showed reduced levels of depression and parenting stress. This was not significant over the longer term. Men in the intervention showed greater levels of social support at the 3-month follow-up, this was not sustained at 6-months. No significant difference was obtained on levels of relationship adjustment, although significance was approached at the 6-month mark, hinting at improved performance for those in the intervention.

PART TWO

4.8 QUALITATIVE RESULTS
In tandem with the main analysis, this research aimed to provide a more complete picture of the implementation, delivery and evaluation of different streams of treatment for PND. This was tackled in two ways. Firstly by conducting focus group interviews to obtain participants perspectives on both the programme they had participated in and their experiences of PND; and secondly, by requesting written evaluations from both participants and referrers to the research and treatment programme. The results of these additional sources of evaluative information follow.

4.8.1 FOCUS GROUP INTERVIEWS

4.8.1.1 WOMEN’S GROUPS 1 & 2
The results of the women's groups 1 and 2 are presented below (full interview transcript in appendices 25 & 26.). These groups consisted of women whose partners were involved in the 6-week men's group. The mood of both groups was relaxed and open. Group 1 was more hesitant to finish the programme. Group 2 was, on the whole, optimistic about the future.

Several major themes or big ideas emerged from the focus groups interviews conducted at the conclusion of the group programs. These are presented below:
To begin with, the experience of having PND emerged as one, which was pervasive and overwhelming for women in both groups. Many women described a strong sense of embarrassment or inadequacy at not fulfilling what they saw as the prescribed role of being a mother.

Voice (V) 1: "I argued with my husband all the time.. I was so sensitive and picky.. and I knew it. and that made me feel worse - but I couldn't help it" (group 1)
V4: "I really tried hard not to let my baby pick it up.. that I was upset .. so I always tried to be happy around him and be strong.. on my own I would collapse -- I was so tired.." (group 1)
V3: "my relationship was in a bad way, it was very hard, I felt him moving away" (group 1)
V1: "I kept trying to keep it together..I didn't want to admit I had PND.. that I wasn't coping. I was scared they would lock me up..put me in a white coat, take my children away from me.. I have a girlfriend who still denies having PND .. after 2 years - she always says.. I never had PND you know!" (group 2)
V5: "I saw my aunty one day when I was waiting outside to see Sarah. No one in my family knew what was happening. .. I felt embarrassed but also relieved.. like I didn't have to carry it on my own anymore" (group 1)
V7: "I remember wanting my life back.. nothing was the same.. I couldn't think properly.. I felt empty.. I felt so guilty that I couldn't cope as a mother" (group 2)
The experience of postnatal depression is one that some group members currently believe will leave a life long impression on them.

- V5: "I don’t think it’s something we’ll just get over and then it’s forgotten all about, like "Oh yeah, that time when I had post natal depression, I went in those little groups" I don’t think it’s going to be like that." (group 2)

The overwhelming consensus from the focus group interviews conducted with groups 1 and 2 was that the programme was of considerable benefit to their recovery from postnatal depression, and beyond that, it provided important life skills. The groups were questioned about specific components of the programme they found useful. A range of ways in which the programme was perceived as useful was discussed by both groups. None of the participants in either group disagreed with the consensus regarding the usefulness of the programme in their recovery process. Programme components cited by both groups 1 and 2 as being useful were:

The relationship strategies, particularly the communication skills;

- V2: “The improved communication skills we have learnt” (group 1)
- V5: “We learnt that no one is to blame, R… and I stopped blaming each other” (group 2)

The normalization of their individual experiences and destigmatization that occurred as a result of the group process. The factual information presented on postnatal depression and maternal mood disorders.

- V4: “That I’m not the only one, I’m part of a group, it’s not just you, there’s other people out there and I’m not mad!” (group 1)
- V1: “The sharing of experiences has been good, you learn a lot from other’s experiences” (group 1)
- V4: “Understanding of PND and what to do about it” (group2)
- V3: “It’s a medical condition, not just something wrong with me” (group 1)

Group 1 focused more on the experiential aspect of the group process and the organizational component as being very important for them; whilst group 2 tended to cite more specific strategies as being the most useful.

- V1: "It was good to have you ring each week, sometimes I would stand by the answering machine, and I would think, I have got to get ready and get down there, it gave me the push I needed!" (All nodding in agreement)
- Moderator (M): So do you think I should keep doing that next time?
- V5: "Yep, definitely"
V4: "I was glad we had the homework, it made me think of things. I realized I have to deal with this now or later, it won’t go away." (Group 1)

Group 1 clearly stated that the crèche made it possible for them to attend the programme. Group 2 focused on the inclusion of the partners and noticed the benefit of increasing the men's understanding of PND:

V1: "I reckon positive changes in managing depression and finding ways out of the depression. And also the partner support group was really really important, because otherwise it just would have been too hard. Because his support and a bit more understanding has helped so much. That was good, and then just the strategies, the practical things like the pleasant activities and that, so yeah, just things to actually work on have made changes. Really stronger and even though I’m still susceptible to the lows or whatever, but at least have some tools to pull myself out, which is very good”.

Other group members emphasized the CBT techniques including the CBT model, the relaxation and stress management strategies, mood monitoring and cognitive therapy.

V2: "I was just going to say the – L….. mentioned about the pleasant activities, tending to be stuck in sort of just the day to day stuff, and not – not allowing yourself time to put in those pleasant things. I think that's made – for me that's made a difference in trying to plan my day to include something for myself as well." (group 2)

V4: "That cognitive behavioral model for me was a real gut wrenching kind of stuff, like wow!
M: Yep, okay, good… What have other people found to be most useful?
V6: "Just the stress and time out."
V7: "The stress management and time out strategies, yeah." (group 2)

The group acknowledged that transformation of thinking styles and unhelpful beliefs was not complete, but something they will continue to work on.

V4: "I'm finding my thoughts changing first, before my actions match and it's still taking a while, but – but the thoughts are there too, to change it, so I still blurt it out and then I know that I shouldn’t have. So, I hope as that person grows stronger, the actions will change too". (group 2)

Both groups were quizzed on the whether they had noticed changes within themselves and the relationships around them over the 10-week course. Again, all group members acknowledged changes had taken place. This is the second major theme to emerge, one of transformation, both within themselves, and in interaction with others. Both groups cited improvements in mood and in managing their depression:

V8: “Now I can be happy most of the time, if not all of the time"
Relationship improvements were common to both groups, not only for intimate relationships, but also relationships with children and extended family. This was seen in less conflict, and reduced relationship tension or improved atmosphere, and more consistent parenting.

V1: "Yeah, it's um – it would have been a lot worst I think, if I hadn't yeah, if K... hadn't gone – Because it's just hard for him to understand when he's not having it and having to deal with the person going through it. More a sort of harmony. It's not perfect or wonderful but yeah, it's definitely workable to get through" (group 2)

V3: "...Just understanding their procedure, because if I had done this on my own without him coming in and "How was your Wednesday?" and I would have gone "Fine". That would have been it – he would never, being quieter, ask more - that's not him. So definitely our relationship has benefited the most out of it – out of it. And also, like K... was saying, just finding some pleasant guilt-free activities for yourself, because I know if I get a break, even if it's just for ten minutes, my quality of care to my kids is much better because I'm recharged, refreshed."

M: Excellent.
V3: "Then D.... knows when I'm stressed or whatever, is that if he says "Have you done anything today for yourself?" "..." (group 2)

V5: "I just know B... and I aren't fighting anymore. We're like – it's just like we can't be bothered fighting any more. There's no point to it all. No, so we – we try to come to a compromise now, or to a completion. I used to be very demanding and very controlling of him – and now I just, well he's his own person. I'm my own person. He'll go his way, as long as it's not too far!"
V2: "We talk more, we notice signs more with each other and we both let things go, rather that reacting and causing arguments. I used to fly off the handle and slam doors, I haven't done that for ages"
V6: "Yeh, R.... is much calmer and less sensitive too" (group 1)

V3: "No he's really relaxed he's really, like I said, much more supportive. Heaps and heaps of support. And we tend to lean on each other more now when we're vulnerable, instead of him not saying anything, but I could feel it in his moods, and then, or me just falling apart and him going "What's the matter?" you know. How hard can it be in that – yeah that's actually the most friends we've been since I got married four years ago".
V2: "Wow!" (group 2)

Relationships with children and other family members are reported to have changed:

V6: "I can discipline now and not feel so terrible. The other day my son was playing quietly and my daughter came up and slapped him for no reason, just because she felt like it, I sent her to her room, for timeout, and took what she was playing with away. She started answering me back, and I kept going, I would never have done that before. I don't feel so guilty anymore!" (group 2)

V4: "I don't get so stressed out with the baby, I used to get to the point of wanting to throw him, but now I don't get so wound up, I'm much calmer in the way I deal with things" (group 1)

V1: "My mum doesn't get so snotty, we communicate better, she seems to understand more that it's not just me, being lazy" (group 1)
V3: "I have noticed my family is happier and more relaxed" (group 1)
Some members of group 2 raised a possible flip side of including partners in the programme. They alluded to being under the spotlight by their partner to progress and make changes in their depression levels:

V1: "because if you get a couple of times when you have had a bad week, it would be like "Oh, where are you going tomorrow?" It's like your not doing anything..."
V2: "or, I'm not going, because you're not changing' sort of thing"
V8: "yeah, yeah"
V2: "Only in anger. You know they didn't really mean it, but..." (group 2)

Several changes within themselves were noted, particularly in regard to belief systems and self-expectations that changed over the 10-week programme. These resulted in not only increased self-awareness but also some concrete behavioral changes such as reordering of priorities and improved self-care. Some examples of changes in thinking styles, belief systems and expectations were:

V3: "I think it was just coming in here – and it was you who mentioned "Why is there this point system?" Because although I knew I was conscious of doing it. I couldn't figure out why, and I think when I really scratched the surface it was going back to when I was younger, trying to point score with my parents. You know, if we passed, Mum's going to get me that, or whatever. And to a certain extent I still do that with Mum and Dad, you know, you're always looking for their approval. But I came to a decision that D...... is my husband and my lover, but not my father...... So, ....and he's backed right off as well, he's totally backed right off." (group 2)

V3: "Just learning not to be supermum, that I don't have to have these expectations of myself......"
V5: "More realistic expectations, I find, yeah."
V6: "Yeah".
V3: "My stress levels have dropped because of that, so then I don't fight with D...... because I'm not stressed, and he's more relaxed...." (group 2)

V8: "I feel more alive now, both positive and negative, like I have woken up" (group 1)

V3: "I have noticed that I have a clearer head, I'm better able to problem solve" (group 1)

V5: "I have found the support of the group has helped maintain a feeling of myself, of who I am, and I had lost that" (group 1)

V7: "I have stopped being the target and put the reflectors on, I don't see myself as being the blame for everything" (group 1)

V6: "It has changed very much, I thought that "I can't cope' and that I shouldn't have had kids, if I can't deal with them or with life" (group 1)

Several women expressed changes in day-to-day priorities:

V2: "It's something I have to work on I think every day for myself. Yeah, it's – it's being aware of that I suppose and not being so hard on myself, like, you know if the house isn't quite up to scratch, not sort of beating myself over the head about it". (group 2)
V3: "I have learnt that giving yourself a break makes you a better mother"
V8: "I have stopped ironing babies' bibs and towels, next is sheets and pillow cases!!"
V4: "It doesn't matter if I don't get it all done...I don't set myself so much to do every day, I didn't know I could do that, I thought I had to get it all done, then I would be down on myself, if I didn't" (group 1)

Group members were asked about changes they would recommend to the programme for future participants. Both groups believed that the programme needed to be longer, for a variety of reasons. These included wanting more practice at specific skills, wanting more reinforcement of skills learnt and changes made, and wanting to maintain the support of the group in the structure they had become accustomed to.

V1: "Well the other thing I would say about the cognitive behaviour model was really, really good, but it maybe needed a little bit more practical work, or homework or something, because I guess it's the work outside that needs to be done, because there's such old patterns of thinking making us feel depressed. That's what I feel, I have to challenge myself more and it's such a big job that it needed more time- - -" (group 2)

Two participants in group 1 found the progressive muscle relaxation exercises difficult to settle into, and one participant found that the use of homework made them feel guilty. One member suggested the men could benefit from the self-esteem work the women had done.

V5: "Relaxation...... I never did listen, I never got into it."
M: **Never got into it?**
V5: "Well I never got round to it, so just trying to - for time out for me, just having time is enough to relax me. I don't need to go into it."
V8: "Get rid of the homework!, I felt guilty when I didn't do it"

One group member in group 2 suggested that the behaviour change model and relapse prevention ideas could have been introduced earlier in the programme because they struck a particular chord with her, as she said:

V1: "- because that way when you fell into a slump, when I felt there was something wrong, it was "Oh my God, I was doing so good, and I can't believe it, you know, what's happened?", so that would have prepared me a little bit more."

One participant found the mood monitoring difficult to accomplish:

V7: "Doing the mood monitoring I did try and do it but I found it - if I'm in a mood I'm not going to sit down and, you know. I just ......"
The women in the programme reported experiencing a strong stigma surrounding postnatal depression within the society in which they live. This surfaced in their reported reluctance to talk about what they were experiencing outside the group environment.

V8: "I can talk about it now, before I wouldn’t have, I kept it to myself" (group 1)
V5: “You feel others will judge you if you talk about it” (group 2)

Women in both groups strongly emphasized the poor community awareness of PND, even amongst health professionals they had encountered. Their perception was that there was a lack of adequate information provided about maternal mood disorders in the antenatal classes they attended.

V7: “I had to bring it up myself when I saw the child health nurse” (group 1)
V5: “I took in a brochure about this programme, and asked if I could have it” (group 1)
V8: “At the checkups they should ask you more about how you are feeling, they just ask about the baby” (group 2)
V3: “The midwives at the hospital never said a thing to me, they should sit down on your bed and explain what can happen, it’s not very personal” (group 1)
V2: “At classes before the birth I can’t even remember it being mentioned” (group 2)

The women clearly felt a need to break down barriers and increase community understanding.

V4: "...now that we’re feeling more empowered and all this awareness, I feel there’s a real need to change things out there... We can’t just say “Yeah, mm”. It’s okay to make it all better in our own homes, in our – with our relationship but we’ve still got to go out there into the big wide world and – and try an – yeah, and I feel like we need to be doing little things to make it better... For our own girls as well as – for our own children – as well as just new mums that are coming up". (group 2)

V1: “There should be a group after your first baby, that looks at just a few things, like your ability and support network if you don’t have family. Just some strategies which could have – on and off – could have avoided the postnatal depression, but .... Even before you have had your baby for someone to come and say “Oh well, at home, what have you got ready?” and “who have you got for support?” and just say “Do you have family?” If you don’t, you know, really think about things. Because it was just such a shock coming home to being a parent with, like, no idea of whether you’re meant to have social support or anything, you know? “ (group 2)

V1: "They are all very concerned to know whether you are putting on weight. Do you have enough protein?, or you’ve got too much....., but no-one ever asks you about your mental health!"
V5: "The doctors are - --
V3: " No one asks you, have you got some support?– no – nothing and I’ve had two and no one ever asked me that before."
V1: "It's all physical Are you looking after yourself? It's just for your baby's sake and that's it".
V8: “No, how are you?”

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V3: Yeah, “has your husband taken time off work?, got someone to do the cleaning? or whatever – when you get home?”. Nothing, just completely physical checking. .....” (group 2)

The women acknowledge that for some, the issue was raised but they were not receptive to the message at the time.

V6: “But I could say that has happened – when I was in hospital with – when I was pregnant that time. When I had the bleeding and the pain and all that and I had the social worker. She came up – I’d had six miscarriages and she came and she gave me a pamphlet on postnatal depression and said, “I think that you are going to be candidate!” ‘I’ve never been depressed in my life, and I was just so excited about J…, you know, and I just threw it out and didn’t listen….. I just ignored it all.” (group 2)

In short, both groups reportedly found the 10-week CBT group programme they participated in to be useful in recovering from PND. Group 1 and 2 shared enthusiasm for the relationship skills, the psychoeducational component and the experience of the group process as being beneficial elements. Both groups commented positively on the organization and structure of the programme. Group 2 reported the cognitive behavioural skills and strategies to be of great value.

Both groups were cognizant of, and readily able to discuss various changes they had noticed in themselves, and in their interactions with others over the course of the 10-weeks. Commonly, changes in depression levels, thinking styles and expectations were cited.

More open and less conflictual communication with partners was observed by group members. Increased tolerance and improved parenting styles were noted. Lastly, improvements in time management and changes in priorities occurred. Both groups requested a longer programme in order to practice skills learnt and reinforce gains made.

All the women raised the issue of the stigma they had experienced associated with having PND and the lack of awareness and understanding in the community in which they live. This included health care professionals directly involved in education and care of new parents.

4.8.1.2 WOMEN’S GROUPS 3, 4, & 5

The focus group interviews of groups 3, 4 and 5 have been collated, as these groups comprised women who participated in the group programme without their partners (full interview transcripts in appendices 27, 28 & 29).

The mood of all three groups was open, and group members were honest in the views they expressed. Group 5 was possibly the most upbeat and positive about finishing the
programme. Groups 3 and 4 were observed to be more reticent about finishing. Group 3 expressed particular keenness to continue meeting. Group 4 portrayed the sense that their recovery process was ongoing.

A number of themes emerged from these interviews, many of which are very similar to those expressed by women's groups 1 and 2. The themes are presented along with relevant excerpts from the audiotaped transcripts.

The experience of having PND was described as having an enormous impact on the women's sense of self, their relationships with their families and extended families. These women described a sense of isolation and desperation to keep up appearances and fit in with society's norms.

Voice (V) 2: "I sort of thought that I was useless because I couldn't cope......and I suppose that came from my Mum because she only had one, but she had everything done, and I had the three and I just thought "I just can't seem to get on top of anything", and so it was – yeah".

Moderator (M): So you thought it was a fundamental flaw within you?
V2: "That's right, yeah." (Group 5)

V2: "Yeah, and it's true that people who haven't been depressed - - -"
V3: "No. It's very hard"
V2: "- don't understand, because I was talking to a friend about all this stuff and that, and she goes to me "Oh God you must be the worst one in your group, are you?"
(Laughter)
V3: "God what a thing to say to you! - - -"
V2: "She doesn't understand at all!" (Group 4)

Like group 1 and 2, the women were asked about the usefulness of the programme and more specifically which components they found useful. The components that all three groups nominated were firstly, the cognitive therapy and the cognitive behavioral model itself.

M: The cognitive behavioural model?
V2: "Yes".
V3: "That was awesome!"
V1: "Yeah. That thinking feeling stuff. That was really useful."
V2: "It really made me sit down and think – that's how I've been dealing with the situation. I want to change it into a positive thing – but it does take time."
V1: "No, but it does work. Right." (Group 3)

V2: "My biggest one would be negative thinking."
M: Negative thinking.
Voices: "Yeah - mm - same here."
V2: "And how to turn that around..... and in the relationship fair fighting."
V5: "I think it's with the negative feeling or negative thinking, um, that it's come basically from childhood. It's like, why didn't I find this out before? ...."(Group 4).

V3: "Mine was the messages from childhood."
M: *Yep.
V3: "Yeah, and it triggered a few things, obviously and, um, I was able to sort of sit back and have a talk with my Mum and Dad and I realized where a lot of my views come from – where I thought I was inadequate and not good enough for anybody else. I know that my Mum's not so much like that, but my grandparents, my aunt and my uncle........ they're all the same. I realized it wasn't just me and....... yeah, it made me think about it for the first time."(Group 5)

Secondly, the support and normalization achieved through shared experience, and the factual information about maternal mood disorders:

V1: "Mine is ........Meeting other women that feel the same as me and so I don't feel so alone. You know, there is other people out there that feel the same way I do."(Group 4)
V1: "But that's the advantage of meeting other ladies like us because we can actually ring up, talk about our problems. ...... I need a friend that will understand when I'm crying; when I'm - and........ This is the biggest advantage in my life, because I never had friends!" (Group 4)

V5: "I found it more therapeutic just being able to talk, yourself."
V2: "And you know that you can say anything... Because then everyone can help you fix that problem or how you can deal with that problem next time."
V1: "Yeah"
V3: " Yeah, just saying it."
V4: "Yeah, just getting it out."
V1: " I felt that that openness, you know, for the first half hour or whatever it is where we just have a chat and talk about our week, I reckon it's just been great....."
V2: "Yeah".
V3: "That was huge for me!" (Group 3)

V3: " I've got a better understanding of what depression is, like it's never really been explained to me to the degree that it has been here. And, so I stopped beating myself up about having it again. Once I really learnt – and knowing that, yeah, like you're not alone. .....Like it's nice to be amongst women who are going through the same thing, because I haven't had that experience either."(Group 3)

Thirdly, the relationship skills and the stress management skills and pleasant activity scheduling were again seen as helpful by these women.

V1: " My own is the fair and unfair fighting and the positive and the negative thinking. And everything, I noticed myself being very angry and bitter. It was my way or no way...."
M: *So you've noticed changes in the way you think, P.. ?
V1: "Absolutely. Big changes! Rather than rushing head first into a discuss – saying something or whatever, um, yeah, it's thought about first, ..And dealt with appropriately I suppose."(Group 5)

V6: "Err, the week we did stress management was very useful."
M: *Yep.
V6: "It made me realize, you know, because, you know, things are not that bad."
M: *Yeah, so your view changed about what was going on in your life?
V6: "Yeah that's right". (Group 5)
V1: "I found that too. I always felt guilty about doing something nice for me. It's like the whole family comes first and you giving us homework and giving us permission to do a pleasant activity and actually having it on paper to say, you know, "I had to do some pleasant activities this day". That was the best thing. I just don't do that".
V2: "It's funny how you need permission from someone!"
V1: "To do something nice for yourself."
V3: "Yeah!" (Group 5)
V5: "For me it's just been the self-awareness. Just learning how to find yourself and do things for yourself again".
V4: "For me it's been the self-nurturing. Like I really feel like I've gone through a transition while I've been here. Giving up smoking and getting out in the garden, and going to yoga are things that I have wanted to do for years!" (Group 3)

Group 3 highlighted the structure and planning of the programme and the problem solving skills. The programme was seen as teaching life skills that have wide applicability, beyond recovery from PND.

V4: "I reckon the structure of the group, the fact that there's an agenda for every week, and that you stuck to that, was very good. Like reassuring and organized, and it wasn't too regimented, and I reckon you're very good at what you do!" (Group 3)
V3: "But this course we've done is almost something that every woman should do."
V2: "Whether you've got kids or not, because there's — everything in life can be dealt with so much better from what we've done in the last ten weeks." (Group 3)

Group 4 found the honesty and acceptance within the group very powerful. They emphasized the importance of the crèche and the sharing of a light snack during the teabreak. This appeared to serve both a social and self-care function.

V5: "Is able to talk.... All the stuff that gets bottled up — it's just nice to talk in a room where you know that the person next to you has felt the same or similar... But I guess also to listen as well,......... to know that you're normal."
M: Yep, so that feeling normal has been a big thing that's come out for everyone?
V3: "And not being judged by what you say to — things being —"
V4: "Being heard, too."
V1: "Yeah, yeah"
V2: "Not being put down".
V4: "Like there was no negative in here. You can say what you want and you weren't judged, I could be honest..."(group 4)

C: Another thing I wanted to ask you guys is how you found the whole childcare set up? Did that work?
V1: "Yeah."
V2: "Great!"
V5: "In fact it's the first time I had given G.... to anybody. I mean to say, you know I have a lot of trouble doing it! But, I couldn't go if there wasn't."
V3: "And also too, like here, I like — because I've never left K... before I started the group in here, and it was a good start because it is very little — it's lovely. - - - "(group 4)

M: Do you mean the actual break, or the actual? - - -
V3: "No, the food!"
M: - the food?
(Laughter)
V5: "Well, it's the only time I get to sit down and eat!"

Group 5 talked about the importance of confidentiality and that they found the assessment process in itself was therapeutic.

V2: "The other thing I found really good is knowing that it was confidential. So basically you could say whatever you wanted and it went no further, and you could sound as stupid as you want to, but that was really good. It was like – you had two hours of just spilling your guts out really." (Group 5)

V4: "When we had that first meeting like before – that was just one on one with you – and when you sat there and asked all those questions – and said "I'm going to ask you some questions now", it was like….. "Oh my God, someone understands". Like those questions were just like "How did you know?" Like, you know, "Are you a fly on the wall in my house?" Like that – that's kind of how I just felt."

For some women, one of the useful things about the group was that it precipitated changes in the ways others saw them, and the PND.

V1: "It certainly made my husband aware of what it's all about and what it's not – I think actually being able to go to a course made him realize that it's not just something I'm imagining. It's a real situation and that there's some groups out there to help. It's not made up or anything." (Group 3)

All the groups talked about changes they noticed in their thinking styles, their behaviour and their relationships with others that they attributed to participation in the programme. The discussion generated illustrates the level of understanding and integration of the cognitive therapy strategies that has occurred for the women. Typical comments about the changes within themselves in their recovery process were:

V2: I'm more confident.
M: Yep. Within yourself, or in particular situations?
V2: In almost everything now.
M: Mm, wow!
V2: I stand up for what I believe and I don't sit back.
M: Yeah. So what are you thinking, – how did that happen? How did that change occur?
V2: Because I realized I was normal.
M: Right.
V2: I was allowed to feel those things and other people can know it too…. Especially where my baby's concerned. I'm, yeah – stand up for him. Yeah, definitely I have worked all through it. (Group 3)

V4: I suppose I've been feeling a lot more. Be it either negative or positive, I'm more aware of that.
M: So feeling more alive?
V4: Yeah!
M: Mmmm.
V4: "And wanting to be a part of things too, like? this group is – um, I've come to really enjoy coming here. And just being able to listen…. and be heard as well. It's been very important, I think, to me."
M: Great, good…… E., what about you?
V5: "Umm, I would say just having a clearer head… Being able to sit down and decipher things. In the very beginning, I was just so numb and vague. Things were just going in one ear and out the other. But now I can, – if I've got a problem, I can sit down and think about it. "Why am I feeling like that? What can I do about it?" Rather than just being so overwhelmed by everything."
V2: "There also seems to be a solution to every problem that doesn't seem as if the whole world – yeah". (Group 3)

V2: "I don't expect so much from myself."
M: Yep.
V2: "I'm not superwoman!"
M: Great.
V2: "I can't be – can't do everything. It's just not physically possible!"
V3: "When I hit a stumble block too, and I start getting anxious. I remember one of the phrases that we were looking at: "does it really matter?" and "what's the worst that can happen?", and that really puts me back on track." (Group 3)

Changes in thinking styles and recovery from depression led to concrete behavioural changes and changes in relationships with others.

V2: "Actually one of the things that's really stuck out in my mind was one week when I was talking about that parent help, and V…. turned round and said to me "So what, if people think that. So what's the big deal?" and that's really stuck in my mind."
M: Good.
V2: "It was just a huge thing – "so what?". .. "So what if they talk about me, they're going to forget it in about five minutes", and things like that, so that really helped me and made me think that, you know, it's not that bad. To go out and do things and ....."
M: So K….. it sounds as if you have really been able to get things into perspective and be able to take the wide angle view on things?
V2: "Yeah, yeah, just like with little things like my house work. It used to take over my life, it's actually on the back seat now and my kids are more important!!, and - - -"
V3: "It was – enormous, yeah."
V2: "An enormous difference!"(Group 5)

Some women believed that their participation in the programme saved their marital relationship.

V4: "I have. Before this – the way I was feeling, I reckon I could have let my partner walk all over me and squash me basically. And I reckon coming here has kept me on track and – like I already knew previously, but I lost it. … All right? Mm, the relationship would have been over. …But yeah…..So coming here and talking about things that happen, going away and thinking about them and speaking about them properly and appropriately, sorting them out, yeah…… I reckon that was a big one for me." (Group 3)

Others received reinforcement for gains made from observers or from observing their own changed interactions with others.

V3: "Yeah, because I'm a lot stronger now. And actually my husband pointed out last week that he can see I'm more confident and he – he thinks it's fantastic because I'm back. He says I've got that spring again! "(Group 3)
V2: "My kids are the same….. I've changed towards them. They haven't changed. They're still the same, but I think I'm more tolerant and controlling and yeah."
V1: "And that you're allowed to have bad days sometimes?"
V2: "Oh yeah. But not flying off the handle!" (Group 3)

V1: "Because I originally said it wasn't me, it was my husband!"
M: Yeah, yeah.
V4: "That's what I used to do – it's all M….'s fault!"
V3: "I always thought it was B….., not me, and she was the one with – well, I still think she's got a problem."
(Laughs)
M: Perhaps she has, but you know, part of that is yours, because you're having to deal with it!
V3: "Well, I'm the one who has to live with this stress because of – yeah, the way I was thinking!" (Group 4)

The behavioural changes the women made actually surprised them. The way they talked about these gains expressed a sense of accomplishment in their achievements.

V4: "- to do it, and not just talk about it!……. Yeah, it probably even gave me the permission – I don't know, but I – there’s three big things I've done in this group- - -"(give up smoking, begin yoga and working in the garden)
M: That's huge. In ten weeks? - - -
V4: "Yeah."
V2: "That's enormous!"
V4: "Yeah, I've just gone and done them and enjoyed them and done it so …….Like to give up smoking as easy as I have, I'm still blown away by it! Like I don't even crave for them!……. And if I do, it's only for a second…. So there's some – I've had a big shift, I have!". (Group 3)

Group members commented on positive changes they had noticed in their fellow group members such as eye contact, self-care, posture etc.:

V2:"You know, you used to keep your head down the whole time… The whole time and now you don’t!!"
V1: "Not make eye contact."
V5: "- except just then."
V3: "Yeah, okay. I'll help – I've noticed a change in you!"
V5: "You have?"
V3: "Because when you started at the beginning it was like, you couldn't do anything. You were saying you couldn't do anything. I mean you've gone out and done your exercise today and started your exercise programme, and the last couple of weeks you have sorted out your money problems and you look so much better!" (Group 5)

The groups were asked to suggest changes to improve the programme. The 3 groups also recommended that partners be included in the programme to increase understanding. Interesting though, group 4 recommended that a separate programme be provided for the men, to enable both the men and women to have their own forums. Some of the women described the interest their partners had shown in gaining knowledge. The women in this group also alluded to the myths that lack of factual information can create.
V1: "I would have liked a bit more – I would have liked a bit more work for my husband as well – a bit more - - ."
V5: "Partners or boyfriend thing anyway."
V1: "Because I have found that I have done it alone a bit."
M: Yep.
V5: "... as you do get asked at the end of the day by the husband, partner or – the father-in-law... What did you do?... You've got to explain to them what's happening, and you think, "Well, it's kind of very personal....."" (Group 4)

V1: "Something for the partners to come along to. I often don't feel like talking about it when I get home.... Yeah, S..... really wanted to learn, like him going somewhere to learn how to grow and take it from there." (Group 5)

The women in group 4 touched on the impact PND has on some male partners.

V2: "Like he feels that it's a reflection that he's not meeting the family needs. That's what he thinks it's about!"
V3: "Yeah, it could be?"
V2: "Because it looks bad upon himself, because you know how men think they've got to fix everything?"
V1: "Yeah" (group 4)

All the groups suggested that the programme needed to be longer, they didn't want to lose any content, but would have liked more time spent on practicing CBT skills and strategies and solidifying gains made.

V3: "I don't think it was long enough."
V5: "No nor do I!"
V1: "Yeah"
V4: "Yeah, I don't think it's long enough."
M: How long do you think?
V5: "Well it might be easier maybe to do a break between – because unfortunately we are all being caught up with, you know, problems with the kids and that. And I know I've got to go back and say, "Right, I've got to get this journal sorted out. I've got to get these ready tonight" and just get into it!"
M: Mm, put it into practice?
V5: "Yeah, so get your head around it. But then I would like to have another – yeah, you know like another ten weeks - - ."
V1: "Yeah."
V5: "- - - further on to try and reinforce it. Because it's like when you give up smoking, or do something that's quite hard. You need that moral support. You know, like Weightwatchers have their meetings, and you know, once you hit your target, you know...
V2: "Yeah"
V5: "- - - you can go once a month. So it's like that reinforcement going on, which is why it's so effective I think. Yeah as – yeah maybe bring two groups together so, on one occasion to just see how people work things?" (Group 4)

Group 3 described the self-esteem work as 'very heavy' and suggested that a light exercise be incorporated into the end of that session. A member of group five suggested that relaxation be incorporated into the end of each session. Not all other group members agreed with this, stating they were more comfortable learning other skills.
V3: "Another one might be – at the end of another class I did, we had to relax and music for half an hour. You'd all sort of lie down and they taught us how to physically relax. I know we had the tapes, but we were doing that together and so it sort of forced you to do it."
M: Yes.
V3: "And, um, yeah learn how to relax and meditate partially."
M: See that's interesting... because we tossed up whether to actually do the relaxation in every class.
V3: "It's time consuming, but this was in every class – it does take up a good half an hour."
M: The other consideration we had with that was, some people actually feel very uncomfortable with that. To do it in a group, and so we were kind of tossing up whether to do it - - -
V5: "See, I'm not one to sit back and listen to music and then breathe deeply or whatever. I just go and jump in the bath. That relaxes me, so I mean for me that would make me feel uncomfortable to do that." (Group 5)

A suggestion was made to do the weekly catch up, homework and progress report at the end of the session because it was time consuming. Other group members thought it was most appropriate where it was. A member of Group 4 stated that she found the pre test measures very difficult to complete at the time due to her depression symptoms, however the group believed they were beneficial because for some, it provided an opportunity to acknowledge where they were at. The group was questioned regarding whether it would have been easier to complete the measures within the group format. This idea met with resounding disapproval from the women.

V1: "Oh no!"
V2: "No, I'd rather not- - -"
V4: "It's very personal isn't it?"
V3: "You have to have time to think don't you?"
V2: "I sort of even thought a bit down after doing it, because I did find it really negative, yeah, oh. Then I was sort of feeling "Oh, well I can't be that bad because I didn't - - Yeah, because it was a scale thing, so you know, that was things that I hadn't actually thought of doing. Um, you know "I thought of harming my baby how many times today?" and "I thought of killing myself many times?""
V1: "Yeah but, Some – everyone's different, so I mean, some - - -"
V3: "For me, when I was bad it made me realize how depressed that was. Because I didn't even realize that I had postnatal depression! And it was the two – that one and that other one that I filled out at the clinic, the little scale."
V5: "Yeah"
V3: "That made me realize that I was really depressed." (Group 4)

Once again the stigma surrounding PND, and the isolation experienced was raised by the women in the three groups. The women expressed a strong perception that beyond the group, they are not able to discuss issues that they discuss in the group with those in their lives, and a strong sense that many people don't understand their experience (including partners). Participants had difficulty in fitting what they were experiencing, with the public perception of PND. They sense the stigma around it, even though they do not carry this view themselves, they are still wary of 'others' out there and the public perception. They are
aware that changes need to occur, and the public needs education about PND. The women were passionate about breaking down barriers to service access.

V4: "People don’t understand it – like they don’t want to know about it – a lot of people run away from it. That’s the experience I’ve had anyway. Even people who are supposed to love and care about you."
V2: "............. But people that care......... it’s certainly important for them to know how I feel. But it’s still a little embarrassing."
V5: "I don’t know whether ‘embarrassing’ is the right word........... I felt almost disappointed in myself."
V1: "Yeah."
V2: "Mmm."
V5: "You know, have this wonderful baby and everything is meant to pick up and you just feel like crap all the time, and you feel like you can’t cope with things that you used to cope with, so it’s disappointment in yourself."
M: Yep.
V4: "See, I’m still embarrassed....... I don’t like letting people know that I’ve even got depression".
M: What’s the embarrassment about?
V4: "People judge you, it’s so - - - - - the word ‘depression’ just puts people off. They’ve got such a negative connotation to it, that I don’t tell them." (Group 3)

V2: "Do you know that’s the main reason I started my TAFE studies, because I want to work in postnatal depression with mothers, and in the facilitation groups and the – my main motivation for it was the fact that it’s so taboo! I mean, how many of us have told everybody that we’re going?"
V4: "I have just – just told family."
V2: "Well, apart from here, I’ve told my Mum – I imagine she told my Dad – but, you know, it doesn’t really matter. My cousin knows and my friend, and that’s it, and even in the friend bit, it was pushing telling her – oh and I told the ladies at my class because we were talking about why we were doing this. That’s why I want to do it – to make it so that women are not ashamed of it. Because the more it’s out there, the more they are going to think “Well, yeah, it’s all right to go and do something about it.” (Group 5)

Again these groups of women recommended changes be made to the antenatal education classes provided by public health services. When the possibility that coverage of these issues may create more anxiety in people was raised, the group discounted this as a legitimate rationale.

V1: "I don’t think the knowledge – the knowledge gives you the power to choose later. If you touch something on it, see, like in my instance I didn’t know what was wrong with me until 2 am in the morning and I flicked through the brochure. I knew that I’d read something about it somewhere, so had I not have, I might have ignored that for a lot longer. Had I not found some information that pin pointed what I was doing."
V4: "I mean, we’ve all had some sort of description about what it’s like to give birth, but we still go ahead and do that don’t we?"
V2: "Yeah."(Group 3)

In summary, the feedback obtained from the three women’s only groups was positive. The women unanimously declared the group programme to be useful in assisting their recovery from PND.
The women reported this recovery in terms of improvement in mood, in increasing levels of self-awareness and self esteem, in establishing more realistic expectations of themselves, in improving their interpersonal relationships and parenting behaviours. The women were surprised and pleased with the gains they had made, and reported receiving positive feedback from others in their lives regarding these changes.

Individual differences existed in what was perceived to be most beneficial in precipitating change. For some it was the cognitive behavioural skills learnt, for others it was more the group experience, the joining and sharing and being listened to in a non-judgmental and confidential environment. All three groups nominated the cognitive therapy, the psychoeducational information, the relationship skills, the reduction in isolation and normalization that occurred through the group experience as most commonly helpful.

Changes consistently recommended to the group programme included increasing the length of the programme to allow for more skills practice, consolidation of gains made and including partners in the intervention process.

The experience of PND as a disorder that substantially impairs global functioning, and is overwhelming and stigmatizing within modern Australian society was expressed strongly by all three groups.

4.8.1.3 MEN'S GROUPS

Focus group interviews were held with both men's groups at the conclusion of their 6-week programme (full transcripts in appendices 30 & 31). The mood for both these groups was relaxed, open and friendly. Group 1 was observed to be more tentative about the conclusion of the programme. Both groups were very open and honest in their feedback.

A number of important themes emerged from the interviews. These themes are presented in conjunction with representative quotations from the men.
Overall, the men demonstrated an understanding of the deeper issues and far reaching implications involved in PND. Willingness and motivation to learn and change their behaviour was observed. The strength of commitment these men showed towards their partners and their children was apparent.

The enormous sense of frustration the men experienced at the situation, at feeling helpless and at their partners was obvious in both groups.

V1: "the sense of frustration, -everything I do is wrong, if I say "has the baby been fed, when I hear him crying.. she takes it as a personal insult" (group 1)

V2: "I'm at a loss to know what to do, we argue over and over about the same things, again and again...I spend time listening, talking about options over and over again.. Finally I get to sleep and think it's all resolved and then a few days later she brings it up again and says, we didn't finish discussing such and such." (group 1)

V3: "This is the second time my wife has had PND. It's been really hard. I have avoided going home at times....." (group 1)

Frustration occurred at the misfiring in communication that emerged within the environment of PND:

V4: "Our communication is not good...L. said the other day that it was easier for her when I'm not there, that hurt... I try to take the pressure off her by looking after the kids and letting her go out... to the movies of whatever... but I get so frustrated and then she gets upset with how I handle the kids..." (group 2)

Another theme that surfaced from the interviews concerned the impact of the experience of PND on the men. The men alluded to PND as being all consuming and isolating.

V4: "I have become a lot more irritable and less patient with the kids...I just find it hard to deal with them. I try to help out, bathing them, taking them out...even just driving them round in the car... I never seem to do the right thing...I don't do things the way L does them...." (group 2)

V5: "everything takes so much longer to get done.. It's like our life has slowed right down. It takes much more effort and organization to go anywhere... Things that used to take my wife 2 minutes, now take 2 hours...I have to be a lot more patient..." (group 2)

There is a reluctance to reach out to others for help, yet once they do they experience a sense of sharing of the burden. The men tapped into something the women talked about, that is, the desire to keep up appearances that 'everything is fine'. It appears there is a common understanding that 'It's not okay to let on we are not coping', perhaps forming the basis of the reluctance to discuss what is going on at home.
Both groups of men were questioned about whether they found the programme useful, and if so, what it was about the programme that was of use to them. Both groups declared the programme had been useful. For some, this had been a surprise, for many it was their first experience with group work. There were individual differences in which components had been of most help. The most beneficial components common to both groups were the factual information, the relationships strategies, and the opportunity to share experiences and be heard. The opportunity to have their experiences acknowledged within a group of peers who had similar experiences was reported to have a powerful normalizing effect, not only for the men themselves, but it appeared to legitimize and provide perspective on the experiences of their partners.

M: What was useful for you about the programme?
V5: "all of it"(group 1)
V8: "I wasn't sure at first, whether we would be in the spotlight, you know. But it's been all been helpful, we have a long way to go but now I have a few ideas" (group 2)

V3: "the fair and unfair fighting was good, I'm getting the hang of it, we still forget and have a go at each other, but it's better" (group 1)
V1: "Oh all the fair fighting techniques I think. Definitely very useful." (group 2)
V1: "Yep, and I found that my partner has been a lot more receptive, because of things I've had to say, and so has coming here. She takes me more seriously."(group 2)
V2: "It's the grounds for setting the peace so you can actually start addressing some of the stuff without killing each other."(group 2)

V6: "The understanding of PND is has been huge, I'm more receptive"(group 1)
V5: "That was 100% useful, and the triggers of PND, it made sense"(group 1)

V4: "Coming in and finding out that everybody – that lots of other guys – they're all different. They've got different jobs and you're all arguing with their missus as well – but the actual coming and acknowledging it with the other guys."(group 2)
V2: "Listening to the experiences of others has been important for me, knowing I'm not alone"(group 1)
V4: "Knowing you're not alone, we are all in the same boat, this was very useful, I'm not able to do this with family- I don't want them interfering- they don't know what it's like - and I can't go into detail" (group 1)
V1: "Knowing what the women were doing, was helpful, where they were at....... finding about PND, that it is real and not just my wife" (group2)
V4: "The family approach was good, not just including the women" (group 1)

Further components cited as useful by group one were the structure of the group and presentation style of the programme, and the component on parenting styles.

V1: "I feel comfortable with the size of the group, I noticed it took me until session 3 to feel connected ... Up until then I wasn't as motivated to come out on a Tuesday evening - after that I looked forward to coming"
V5: "The length was good, not too long, not too short, the presentation style was good"
V2: "Spending time with the kids, the info we covered on that, was good"

Group 2 highlighted different components. Some group members commented on the usefulness of having both a male and female facilitator and having the group conducted by mental health professionals. This appeared to provide increased legitimacy to the programme.

V4: "it was good having both of you, you know a woman's and a men's view on things'
V1: "Partly, and also I think because she believes that I'm getting -- I'm talking to somebody who knows what they're talking about and now that -- you know?, I'm not just talking shit anymore ...."
V3: "it's not just coming from Johnno!!" (laughter)

The group problem solving that occurred when men talked about things they were struggling with and the strategies shared was considered helpful.

V6: "Yeah, it's very good for ideas, like, some of the ideas are pretty good that, you know, when you're boggled down with your own dramas, you don't really tend to think about it, which was good. I've -- you know, you've learned a lot while coming here today. So again, when you have these problems, you know, you find it hard to concentrate on what you've got. You don't really realize that I suppose....."
V8: "The ideas of others were good, and coming and acknowledging with others what is going on"

There were individual differences in what was found useful, for example one participant took exception to the CBT model, he also struggled with what he saw as the permission given for the women to be selfish.

V6: "I just don't like it. It's just like somebody else's model, you know?.
M: "Right".
V6: " Especially if it isn't exactly.....doesn't fit for you, you know?. It may fit for 80% of people, but if it doesn't fit for you........... "
V6: " I mean, the women have taken the whole freedom thing to extreme and taken on this idea of being in control, you know?.......I just thought that, you know, maybe we're getting -- getting a bit soft, you know?."
V4: "It's more a side of I feel they were encouraged to be a bit selfish, you know what I mean? Like they've got kids, and a husband, you can't be selfish. We're not selfish. We don't just think about ourselves. That was the bit that got me."

Both men's groups were quizzed on the changes they would recommend to the programme they had participated in. Both groups suggested that the programme needed to be longer. They requested more relationship work both within the group and in combination with additional couples counselling sessions.

V3: "It needs to be longer,"
M: What, more sessions or longer sessions?
All: "Both"
M: But don't you think guys would be put off in the beginning if we made it much longer, it's a big time commitment?
V5: "Mmmm, maybe you could ask them half way through"
V1: "We didn't get to cover everything, and we could have done with more time"
V2: "Yeh,.. More on relationships" (group 1)
V8: "More on relationship issues and marital counselling.. I'm now much more receptive to counselling"(group 2)

One participant suggested this was important for people who would find it difficult to discuss issues such as sexual relationships within a group format.

V4: "Then we'd get lots more rational feedback from us, but it's different to coming home and having a go. If we were here in these controlled circumstances, like, you know talking about sex and problems like that, you know....... It's just hard to make these conversations."

Like the women, Group 2 also recommended changes to the antenatal education groups currently conducted.

V6: "I think there should be antenatal input, you should go and give the antenatal classes some preparation and information about what to expect and what could happen..."
V5: "Yep, the whole antenatal classes need restructuring.."

The men reported a number of belief and behavioral changes, that they attributed to the group participation. This had an impact on the way they thought of themselves and their role within their family, and in the development of their partner's depression and recovery. The men described being more willing to accept some responsibility for the situation and for the solution. This had a flow-on effect in reported improvements in their relationships.

V1: "S...... told me that when we came to this course it was to learn – she said "Oh you'll learn all about what we're going through, and how to deal – how to deal with it". So I have yet to inform her that that's not exactly what we did!. But that – that in itself for her, like was the – I think was the big
thing. That she – she – in her head I've been learning about – about the women, you know?, and although we didn't really talk about them as much as we did ourselves!
V1: "Yeah, that's right. The fact that she thought that – that we were learning how to deal with them when they're stressed out – and we were learning how to deal with their PND and that was enough for her to be a hell of a lot more receptive when I come home and when I talk to her."
M: **Yep. So do you think that the programme has been useful at all in doing that?**
V1: "Oh 100%.
M: **Yeah.**
V1: "Totally useful in my relationship!"

V5: "Yeah, and I can also – from my point of view – I can see that I was affected by it as well, not by being depressed but by those factors myself. Which has made me – kicked me in the arse to say, "Well, come on, get your shit together". "You are a big part of the problem, it's not just M….. that's causing the problems, you know". (group 2)

The men were surprised at how proud they felt that they had participated, and how much respect others had shown them. This appeared to be in direct contrast to their expectations. They could see the progression they had made from initially being embarrassed about seeking help, and then overcoming this, and recognizing this was a good thing they were doing.

V1: "I couldn't when – remember when you first mentioned the idea of a men's group?, and I said, you know, "What are we going to do? All sit down and talk about our feelings and shit like that." And then – it's funny now that we've actually been here and done that, I've sort of said to me brother and that; well last week I was working with him and I said "I've got to go to my men's group", and he said - the reaction." (laughs)
M: **What was the reaction?**
V1: "Well no, actually I'm very surprised. I thought – At first I thought everyone would be looking at you like you were mad, you know?.."
M: **Yeah.**
V1: "Like, you know, but from the women they were like they seemed to give you a bit more respect!, and the guys were really receptive."(group 2)

M: **What was the response you got from the people that you shared that with?**
V2: "Oh pretty interested, because you know, some of them are from America, so it's like pretty unusual thing to do, you know, and being sort of 60+, that wasn't available to them and I think, going through their 40s, they would have all thought it was really crazy. But now they're in their 60s they're like, well "God damn, I wish I had that – available", you know?.... and especially saying it was like a fathering thing ...how to be a better parent, type thing." (group 1)

V1: "I was extremely surprised. I thought people would react completely – they reacted completely different. You think they are going to ridicule you and take the piss!. Especially the blokes, you know, and the – the guys say "What do you do there?" You know, and you can talk about it– and they're actually quite interested in it, you know?!
V2: "Well it's crazy, the two biggest things don't get taught about. It's probably like getting married and having kids and retiring!. Nothing in society, teaches you about the two biggest things in life!" (group 2)

As indicated in some of the quotations above, as well as those below, the men in group 2 recognized and discussed the stigma surrounding PND.
V2: "Yeah, I said I was going to a fathering group, you know and how to become a better father, and stuff like that, because it’s a bit of a sensitive topic saying you’re going to a post natal depression group. Depression gets people a bit .... Yeah, well my wife, she’s sensitive about that, you know?"
M: Mm......
V2: "Because it’s more – I guess it affects them directly and their perceived image, rather than us."

The changing role and expectations of men in Australian society was highlighted in the discussions the groups conducted. The struggle between the views and beliefs and rules their fathers and grandfathers lived by and the ones they are trying to struggle with is apparent. Exposing the juxtaposition between their working life, home life and life as an adult male in our society. The clash between the traditional and postmodern family values and expectations comes to the fore. Some are finding this more difficult than others.

Others sense that this struggle is not being acknowledged, they were expected to just "get with the picture " and that women’s expectations had changed. They were now expected to be far more rounded individuals, as the base standard. There was a perception that the effort this takes is not always being recognized.

V1: "I’m not sure about you guys, but I think the women tend to put, um, like it was always a big issue for the man to go and make the money. Now it’s more expected now. I don’t know whether the rest of you will agree that, like, they don’t – I feel that there’s not enough – like if I’m out working, when I come home I’m expected to – to take over, and take over that role and they put less emphasis, well it’s like they take it for granted that you’re going to – that that the job is nothing, you know?"
V5: "Yep."
V1: "Do you know what I mean? Whereas when we first – when S.... first was pregnant, she said "Oh, you’re going to resent me because I’m not working". You know?, and I thought “That’s great", you know, at least she’s going to appreciate the fact that I’m still working and she’s not. And now, like, she doesn’t resent – she resents me when I’m not working, like to get out there and but – but it’s like – it’s not appreciated as much. The fact that you’ve got two lives. You haven’t just got that one at home; you’ve got to deal with all the crap at work and then come home and deal with her crap as well..." (group 2)

Finally, the men displayed insight into the lack of organized support for men and the limited venues and forums for men to address issues troubling them, but also awareness that they would never have participated in such a programme if it hadn't been because they were doing it for their partner and children.

V6: "There is no other forum like this" (group 1)
V2: "I found at work, a lot of people at lunchtime things come up, you know? Oh you know, this happened and that happened ....."
V1: "But we’re not organized, not the way girls seem to do it."
V2: "Yeah, you get sort of groups of fathers, I mean groups of single men, you know, and when the child talk start comes up with the groups of fathers, single men, are like "Oh I've finished my lunch ..."." (group 2)

V2: "The closest I got to saying "I'm going to me men's group" was I told the boss I was knocking off early one Tuesday, and he said "Well, what's more important than work?" Oh, I said "My missus!". I still couldn't get 'men's group' out". (group 1)

In brief, the men in these groups experienced PND as a condition that unraveled their usual functioning and coping skills. This resulted in reportedly overwhelming feelings of frustration and helplessness. It appeared that these men were as keen as the primary clients, the women, to 'soak up' information and trial strategies for change.

The men in both groups reported that being involved in the programme had been of great benefit to them, not only in providing support for their partners and children, but also in reducing their own stress levels and becoming mindful of the impact that prolonged stress, such as PND can have on them. The men reported increased understanding, less arguments and more open communication with their spouses. Some of the men were surprised at how much they enjoyed the programme and felt proud of their involvement. Almost unanimously, the relationship strategies, the opportunity to be heard and to share experiences and the psychoeducational information was highly valued by the men. The men reported that both the content and the structure/organization of the programme was appropriate for their needs.

The men requested a longer programme with more time to be spent on relationship issues; they also favoured experiential learning activities such as role-plays. The men openly discussed the lack of available forums for men and the isolation they feel in their work and social lives when they are faced with family difficulties that are perceived to be psychologically based. Once given the opportunity, however, these men in general, indicate a willingness to participate and implement changes. A deeper theme of the conflict and uncertainty in the roles and expectations for men in this society was underlined.

4.9 PROGRAMME EVALUATION

At the conclusion of the intervention programme, male and female subjects were asked to complete an evaluation questionnaire providing their feedback on the programme they had participated in and to make recommendations for future change. This evaluation
questionnaire was anonymous to encourage reliability in feedback. Due to the fact that the subjects had already completed several paper and pencil measures for the study, these questionnaires were designed to be as brief as possible (see appendices 17, 18 & 19). In part, these evaluation questionnaires were designed to provide a validity measure for the focus group interviews. Detailed below are the results of the men's and women's questionnaires.

4.9.1 RESULTS OF THE WOMEN'S EVALUATION QUESTIONNAIRE

Thirty-five women who participated in the intervention programme completed an anonymous evaluation questionnaire, 13 women from the 'group plus partner' intervention, 13 from the 'group women only' and 9 women who participated in the 'individual intervention'. Again, this questionnaire was designed in part to increase the validity of the focus group interviews by providing participants with an opportunity to provide feedback individually, outside the group environment. The women's questionnaire comprised 7 main questions, which used a 5-point Likert scale and open-ended responses. (see appendix 17).

The questions rated on a Likert scale were subjected to ANOVA by intervention type to determine whether any significant differences in responses occurred according to treatment received. No significant differences were obtained for any of the questions, suggesting the there was no significant differences in how subjects' perceived the programme they participated in, or in what components they rated as most useful in their recovery.

Table 4.18: Subject's responses to helpfulness of programme in recovery from PND.

<table>
<thead>
<tr>
<th>Responses</th>
<th>% of responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Of great help</td>
<td>71.4%</td>
</tr>
<tr>
<td>Of some help</td>
<td>28.6%</td>
</tr>
</tbody>
</table>

As indicated, over 70% of the sample of women participating in the programme perceived it to be of great help in their recovery. The women were then asked to list the benefits they obtained from their participation in the programme. Table 4.19 provides the percentages of responses for benefits listed. The majority of women in the sample cited the increased
support they had obtained from the programme as beneficial (62.9%). Cognitive and behavioural strategies were also cited as beneficial (54% and 48.6% respectively).

Table 4.19: Benefits obtained from programme attendance in percentages.

<table>
<thead>
<tr>
<th>Benefits obtained</th>
<th>% of sample (n=35)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased support</td>
<td>62.9%</td>
</tr>
<tr>
<td>Increased self esteem</td>
<td>17.1%</td>
</tr>
<tr>
<td>Cognitive strategies</td>
<td>54%</td>
</tr>
<tr>
<td>Behavioral strategies</td>
<td>48.6%</td>
</tr>
</tbody>
</table>

Table 4.20: Subject’s response to effect of programme on relationship with their infant.

<table>
<thead>
<tr>
<th>Relationship with infant</th>
<th>% of responses (n=35)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Much better</td>
<td>45.7%</td>
</tr>
<tr>
<td>A little better</td>
<td>42.9%</td>
</tr>
<tr>
<td>Not really much help</td>
<td>8.6%</td>
</tr>
<tr>
<td>Of no help</td>
<td>2.9%</td>
</tr>
</tbody>
</table>

Table 4.21: Components involved with improvements in relationship with infant in percentages.

<table>
<thead>
<tr>
<th>Improvements</th>
<th>% of sample (n=35)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased tolerance</td>
<td>54.3%</td>
</tr>
<tr>
<td>More understanding of infant</td>
<td>34.3%</td>
</tr>
<tr>
<td>Improved communication</td>
<td>22.9%</td>
</tr>
</tbody>
</table>

Question two quizzed subjects on the success of the intervention programme in improving their relationship with their infant. Over 80% of the sample reported that the intervention programme had had a beneficial effect on improving their relationship with their baby. Almost 3% of the sample found that the programme was of no help in their relationship with their infant. Table 4.20 indicates that the majority of mothers reported that increased tolerance was something they noticed (54.3%). A third of the sample listed increased understanding, whilst a fifth nominated improved communication as being effective.
Subjects were asked whether their participation in the intervention had any impact on their relationship with their older child/children. Again over 60% indicated that they believed their relationship with their older child was much or a little better for their participation. Table 4.23 shows that again, a third of the sample attributed this to their increased tolerance, whilst improved communication and understanding of their child was important to a fair proportion of the group.

Table 4.22: Subject's responses to effect of programme on relationship with older child/children.

<table>
<thead>
<tr>
<th>Responses</th>
<th>% of responses (n=23)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Much better</td>
<td>42.9%</td>
</tr>
<tr>
<td>A little better</td>
<td>20%</td>
</tr>
<tr>
<td>Not really much help</td>
<td>2.9%</td>
</tr>
</tbody>
</table>

Table 4.23: Components involved with improvements in relationship with older child/children in percentages.

<table>
<thead>
<tr>
<th>Improvements</th>
<th>% of sample (n=23)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased tolerance</td>
<td>31.4%</td>
</tr>
<tr>
<td>More understanding of child</td>
<td>25.7%</td>
</tr>
<tr>
<td>Improved communication</td>
<td>22.9%</td>
</tr>
</tbody>
</table>

Subjects were asked whether the intervention programme had been effective in helping them to cope better with stress. The entire sample found the intervention to be of some or of great help in dealing with stress (see Table 4.24). Table 4.25 shows that the cognitive components were listed as helpful by more subjects than the behavioural components of the intervention, 85.7% versus 60%.

Table 4.24: Subject's response to effectiveness of programme in coping with stress.

<table>
<thead>
<tr>
<th>Responses</th>
<th>% of responses (n=35)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Of great help</td>
<td>60%</td>
</tr>
<tr>
<td>Of some help</td>
<td>40%</td>
</tr>
</tbody>
</table>
Table 4.25: Components involved in assistance in coping with stress in percentages

<table>
<thead>
<tr>
<th>Components</th>
<th>% of sample (n=35)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive strategies</td>
<td>85.7%</td>
</tr>
<tr>
<td>Behavioral strategies</td>
<td>60%</td>
</tr>
</tbody>
</table>

Over 90% of subjects found the intervention to be helpful in obtaining a greater sense of control and direction in their lives. In this area, the behavioural components of the intervention were listed most often as the most effective, although cognitive strategies were similarly effective as Table 4.27 reveals.

Table 4.26: Subject’s response to effectiveness of programme in obtaining greater sense of control and direction in life.

<table>
<thead>
<tr>
<th>Responses</th>
<th>% of responses (n=35)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Of great help</td>
<td>51.4%</td>
</tr>
<tr>
<td>Of some help</td>
<td>42.9%</td>
</tr>
<tr>
<td>Not really much help</td>
<td>2.9%</td>
</tr>
<tr>
<td>Of no help</td>
<td>2.9%</td>
</tr>
</tbody>
</table>

Table 4.27: Components involved in improvements in control and direction in life in percentages

<table>
<thead>
<tr>
<th>Components</th>
<th>% of sample (n=35)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive strategies</td>
<td>54.3%</td>
</tr>
<tr>
<td>Behavioral strategies</td>
<td>57%</td>
</tr>
</tbody>
</table>

In terms of effectiveness in improving their relationship with their partners, over 78% of subjects indicated that the intervention was effective in this regard. However, for 20% of subjects the intervention was not at all effective in improving the relationship with their partner. Table 4.29 shows that communication skills learnt in the programme were most often nominated as important components, as was the lifting of the woman’s depression.

Table 4.28: Subject’s response to effectiveness of programme in improving relationship with partner.

<table>
<thead>
<tr>
<th>Responses</th>
<th>% of responses (n=35)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Much better</td>
<td>42.9%</td>
</tr>
<tr>
<td>-------------------</td>
<td>-------</td>
</tr>
<tr>
<td>A little better</td>
<td>37.1%</td>
</tr>
<tr>
<td>Not really much better</td>
<td>20%</td>
</tr>
</tbody>
</table>

Table 4.29: Components involved in improvements in relationship with partner in percentages.

<table>
<thead>
<tr>
<th>Components</th>
<th>% of sample (n=35)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication skills</td>
<td>74.3%</td>
</tr>
<tr>
<td>Reduction in my depression</td>
<td>31.4%</td>
</tr>
</tbody>
</table>

Table 4.30: Usefulness of components of the programme as rated by subjects in percentage of sample

<table>
<thead>
<tr>
<th>Programme component</th>
<th>Great benefit</th>
<th>Moderate benefit</th>
<th>Benefit</th>
<th>Some benefit</th>
<th>No benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understanding PND</td>
<td>74.3%</td>
<td>17.1%</td>
<td>5.7%</td>
<td>2.9%</td>
<td>0</td>
</tr>
<tr>
<td>Discuss problems</td>
<td>28.6%</td>
<td>22.9%</td>
<td>5.7%</td>
<td>8.6%</td>
<td>8.6%</td>
</tr>
<tr>
<td>Building social network</td>
<td>31.4%</td>
<td>22.9%</td>
<td>14.3%</td>
<td>5.7%</td>
<td>0</td>
</tr>
<tr>
<td>Partner involved</td>
<td>54.3%</td>
<td>25.7%</td>
<td>17.1%</td>
<td>2.9%</td>
<td>0</td>
</tr>
<tr>
<td>Discuss experiences</td>
<td>57.1%</td>
<td>31.4%</td>
<td>2.9%</td>
<td>5.7%</td>
<td>2.9%</td>
</tr>
<tr>
<td>Support from group</td>
<td>45.7%</td>
<td>20%</td>
<td>5.7%</td>
<td>2.9%</td>
<td>0</td>
</tr>
<tr>
<td>Homework</td>
<td>28.6%</td>
<td>51.4%</td>
<td>14.3%</td>
<td>5.7%</td>
<td>0</td>
</tr>
<tr>
<td>Handouts</td>
<td>62.9%</td>
<td>22.9%</td>
<td>8.6%</td>
<td>2.0%</td>
<td>2.9%</td>
</tr>
<tr>
<td>Relaxation exercises</td>
<td>34.3%</td>
<td>34.3%</td>
<td>20%</td>
<td>5.7%</td>
<td>5.7%</td>
</tr>
<tr>
<td>Pleasant activities</td>
<td>60%</td>
<td>22.9%</td>
<td>8.6%</td>
<td>2.9%</td>
<td>5.7%</td>
</tr>
<tr>
<td>Communication skills</td>
<td>60%</td>
<td>25.7%</td>
<td>11.4%</td>
<td>0</td>
<td>2.9%</td>
</tr>
<tr>
<td>Balancing thinking</td>
<td>71.4%</td>
<td>14.3%</td>
<td>11.4%</td>
<td>2.9%</td>
<td>0</td>
</tr>
<tr>
<td>Rational thinking</td>
<td>62.9%</td>
<td>17.1%</td>
<td>17.1%</td>
<td>2.9%</td>
<td>0</td>
</tr>
<tr>
<td>Problem solving</td>
<td>62.9%</td>
<td>11.4%</td>
<td>22.9%</td>
<td>2.9%</td>
<td>0</td>
</tr>
<tr>
<td>Goal setting</td>
<td>57.1%</td>
<td>20%</td>
<td>14.3%</td>
<td>2.0%</td>
<td>5.7%</td>
</tr>
</tbody>
</table>

Subjects were asked to rate the usefulness of listed components of the intervention programme on a 5-point Likert scale. On the whole, all intervention programme components were rated as having benefit by the overwhelming majority of subjects in this sample (Table 4.30).
The psychoeducational information about PND was rated most highly by most subjects in this sample (74.3%), this was followed by the cognitive strategies (71.4% and 63%), the weekly handouts (63%), the pleasant activities and communication skills (60% respectively). The opportunity to discuss problems with others and building a social support network, was rated lower than specific skills, but of considerable benefit nonetheless.

4.9.2 RESULTS OF THE MEN’S EVALUATION QUESTIONNAIRE
A sample of 10 men who participated in the 6-week men's group completed and returned the post intervention evaluation questionnaire. Question 1 asked the subjects to list what they had gained from participation in the programme. Table 4.31 provides percentages of responses given by the men. All 10 subjects (100%) noted increased understanding about PND as something they had gained from the programme. Sixty percent of the sample reported they had gained 'personal insights' from the programme, this referred to increased understanding of own issues and potential risks for depression. Half the sample listed conflict resolution skills as a gain and a 'happier partner', emphasizing one of the main motivations for participation for the men.

Table 4.31: Gains from participation in the men's programme listed by the men in the group.

<table>
<thead>
<tr>
<th>Gains listed</th>
<th>% of sample (n=10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Happier partner</td>
<td>50%</td>
</tr>
<tr>
<td>Increased understanding PND</td>
<td>100%</td>
</tr>
<tr>
<td>Personal insights</td>
<td>60%</td>
</tr>
<tr>
<td>Stress management info.</td>
<td>40%</td>
</tr>
<tr>
<td>Conflict resolution skills</td>
<td>50%</td>
</tr>
</tbody>
</table>

Table 4.32: Skills and strategies subjects reported using in daily life

<table>
<thead>
<tr>
<th>Skills and strategies</th>
<th>% of sample (n=10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Offering practical support to partner</td>
<td>40%</td>
</tr>
<tr>
<td>Conflict resolution skills</td>
<td>70%</td>
</tr>
<tr>
<td>Time management skills</td>
<td>20%</td>
</tr>
<tr>
<td>Emotional support to partner</td>
<td>60%</td>
</tr>
<tr>
<td>Increased hope</td>
<td>10%</td>
</tr>
</tbody>
</table>
Question 2 requested information on the skills and strategies learnt that the men were applying in their daily lives (see Table 4.32). Seventy percent of the men reported they were using the conflict resolution skills they had learnt. Sixty percent stated they were providing more emotional support to their partners and 40% said they were offering more practical support. One subject listed 'having more hope' as a strategy he was now applying in his daily life.

Table 4.33: Recommended changes to be made to the programme by the participants

<table>
<thead>
<tr>
<th>Recommended changes</th>
<th>% of sample (n=10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Longer programme</td>
<td>60%</td>
</tr>
<tr>
<td>More role play of skills</td>
<td>20%</td>
</tr>
<tr>
<td>Anger management info.</td>
<td>10%</td>
</tr>
<tr>
<td>Hear from peer 'survivors'</td>
<td>10%</td>
</tr>
</tbody>
</table>

On a Likert scale of 1-5, subjects were asked how useful they would rate the knowledge they gained from participation in the men's group. Fifty percent of the sample rated the knowledge as 'highly useful' and fifty percent rated it as 'moderately useful'. Subjects were asked to make recommendations for change to the men's programme (see Table 4.33). The majority of the sample recommended the programme be longer and changes to include more role playing of skills, information on anger management and use of peer survivors within the programme.

4.10 RESULTS OF THE REFERRER'S EVALUATION QUESTIONNAIRE

Health and allied health professionals who referred their clients to the research programme were also requested to complete a questionnaire giving their professional views and observations on the progress their clients had made, and which component they believed had been most effective in implementing change. It was decided to obtain these observations and views for two main reasons. Firstly, this information provided a validity check of subject's progress post intervention from an external source. Secondly, for a community intervention programme such as this to be successful within real world communities, it needs to be acceptable to referrers. This requires programme evaluation.
A total of 39 referrers were asked to complete a questionnaire regarding the progress of the clients they had referred and the programme in general (see appendix 19). This sample consisted of 26 General Practitioners (GP’s) and 13 nurses and allied health professionals. The allied health professionals were social workers and psychologists. A total return rate of 44% was achieved after two reminder notes were posted out, 2 weeks apart. The return rate for GP’s was 35%, whilst the return rate for nurses and allied health was 62%. The sample consisted of nine GP’s and eight child health nurses and allied health professionals. Table 4.34 provides a breakdown of responses in percentages.

Table 4.34: Percentage responses to administration issues and recommendations for Nurses and Allied Health (NAH) and General Practitioners (GP’s).

<table>
<thead>
<tr>
<th>Issue</th>
<th>NAH (% of sample)</th>
<th>GP’s (% of sample)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Of service</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weekly</td>
<td>0%</td>
<td>11%</td>
</tr>
<tr>
<td>Fortnightly</td>
<td>12.5%</td>
<td>0%</td>
</tr>
<tr>
<td>Monthly</td>
<td>50%</td>
<td>11%</td>
</tr>
<tr>
<td>2 monthly</td>
<td>0%</td>
<td>11%</td>
</tr>
<tr>
<td>Occasionally</td>
<td>37.5%</td>
<td>66%</td>
</tr>
<tr>
<td>Info re research programme</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colleagues</td>
<td>100%</td>
<td>66%</td>
</tr>
<tr>
<td>Media</td>
<td></td>
<td>22%</td>
</tr>
<tr>
<td>Clients</td>
<td></td>
<td>11%</td>
</tr>
<tr>
<td>Feedback preference</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Written</td>
<td>62.5%</td>
<td>11%</td>
</tr>
<tr>
<td>Phone</td>
<td>25%</td>
<td>22%</td>
</tr>
<tr>
<td>Face to face</td>
<td>12.5%</td>
<td>22%</td>
</tr>
<tr>
<td>No preferred method</td>
<td></td>
<td>44%</td>
</tr>
<tr>
<td>Changes recommended</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Immediate crisis management</td>
<td>12.5%</td>
<td></td>
</tr>
<tr>
<td>More groups</td>
<td>50%</td>
<td></td>
</tr>
<tr>
<td>More formal reporting</td>
<td></td>
<td>44%</td>
</tr>
</tbody>
</table>

Table 4.70 in appendix 22 presents the percentage responses for the entire sample of referrers (n=17). The two subgroups were combined after t-test analyses revealed no significant differences on ratings from referrers on overall satisfaction and on which
components of the programme they believed were most effective for their clients. The overall ratings on the client satisfaction scale, which reports on the level of satisfaction clients expressed to the referrers regarding the intervention failed to reach significance (t (15) = -2.1, not significant), although nurses and allied health professionals reported greater client satisfaction as determined by the means (1.5 compared with 2.33, where lower numerical values indicate greater satisfaction).

Analysis was conducted on questions such as how the referrer had heard about the programme, how often they had seen the client they had referred, how they would prefer feedback regarding their client to occur, and changes they would recommend to the programme. This is presented in Table 4.34.

All programme components were rated as having some effect on client's recovery. The psychoeducational information about PND, the stress management strategies, the problems solving skills and the building of social support networks being most often rated as extremely or very effective in reducing depression. Pleasant events and thought monitoring was least often rated as extremely or very effective in assisting recovery. Table 4.35 presents this information.

Table 4.35: Effectiveness of components of the programme as rated by referrers in percentage of sample

<table>
<thead>
<tr>
<th>Programme component</th>
<th>Extremely Effective</th>
<th>Very Effective</th>
<th>Effective</th>
<th>Somewhat Effective</th>
<th>Not at all effective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information PND</td>
<td>29.4%</td>
<td>23.5%</td>
<td>29.4%</td>
<td>5.9%</td>
<td>0%</td>
</tr>
<tr>
<td>Building social support</td>
<td>17.6%</td>
<td>35.3%</td>
<td>35.3%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Monitoring daily mood</td>
<td>11.8%</td>
<td>17.6%</td>
<td>58.8%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Relaxation strategies</td>
<td>11.8%</td>
<td>35.3%</td>
<td>41.2%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Pleasant events</td>
<td>11.8%</td>
<td>17.7%</td>
<td>58.8%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Time management</td>
<td>11.8%</td>
<td>23.5%</td>
<td>52.9%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Thought monitoring</td>
<td>11.8%</td>
<td>29.4%</td>
<td>47.1%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Helpful thinking</td>
<td>17.6%</td>
<td>29.4%</td>
<td>41.2%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Stress management</td>
<td>17.6%</td>
<td>41.2%</td>
<td>29.4%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Problem solving skills</td>
<td>11.8%</td>
<td>41.2%</td>
<td>35.3%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Communication skills</td>
<td>17.6%</td>
<td>29.4%</td>
<td>41.2%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Relapse prevention</td>
<td>17.6%</td>
<td>23.5%</td>
<td>47.1%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>
Table 4.36: Satisfaction with components of the programme as rated by referrers in percentage of sample

<table>
<thead>
<tr>
<th>Component</th>
<th>Extremely satisfied</th>
<th>Very satisfied</th>
<th>Satisfied</th>
<th>Somewhat satisfied</th>
<th>Not at all satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feedback provided</td>
<td>35.3%</td>
<td>23.5%</td>
<td>17.6%</td>
<td>23.5%</td>
<td>0%</td>
</tr>
<tr>
<td>Reported client satisfaction</td>
<td>35.5%</td>
<td>41.2%</td>
<td>17.6%</td>
<td>5.9%</td>
<td>0%</td>
</tr>
<tr>
<td>Referral process</td>
<td>35.3%</td>
<td>29.4%</td>
<td>23.5%</td>
<td>5.9%</td>
<td>5.9%</td>
</tr>
<tr>
<td>Referrer satisfaction with intervention</td>
<td>47.1%</td>
<td>17.6%</td>
<td>29.4%</td>
<td>5.9%</td>
<td>0%</td>
</tr>
</tbody>
</table>

In terms of overall satisfaction ratings, 88.3% of the sample were satisfied or more than satisfied with the referral process used throughout the treatment phase. The vast majority (94.1%) of clients reported satisfaction to their health professional about the intervention they had participated in. Again, 94.1% of referrers were satisfied with the intervention programme their clients had participated in, although a lesser percentage (76.5%) of referrer's were satisfied about the feedback process regarding their clients once referred to the programme (Table 4.36).

Table 4.37 presents the overall changes in symptomatology as observed by the referrers in their clients. All referrers reported some improvement in their client's levels of depression, anxiety and coping with stress. Over 88% of the sample reported significant or moderate improvement in depression, anxiety and stress coping in their clients.

Table 4.37: Effectiveness of components of the programme as rated by referrers in percentage of sample

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>Sig. Improve</th>
<th>Mod. Improve</th>
<th>Improve.</th>
<th>Some improve.</th>
<th>No improve.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Changes in depression</td>
<td>35.3%</td>
<td>52.9%</td>
<td>5.9%</td>
<td>5.9%</td>
<td>0%</td>
</tr>
<tr>
<td>Changes in anxiety</td>
<td>29.4%</td>
<td>58.8%</td>
<td>5.9%</td>
<td>5.9%</td>
<td>0%</td>
</tr>
<tr>
<td>Coping with stress</td>
<td>35.3%</td>
<td>52.9%</td>
<td>5.9%</td>
<td>5.9%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Referrers were also asked to list changes other than those above that they had noticed in their clients who had been referred to the intervention programme. Over a fifth of the sample reported increased self-esteem or self-confidence in their clients. Almost 6% reported improved decision making and problem solving, that their clients presented as
more relaxed and with larger social networks. Nearly 18% of the referrers reported their clients were presenting with greater insight into their problem and triggering factors.

Table 4.38: Additional changes observed by referrers in their clients

<table>
<thead>
<tr>
<th>Change listed</th>
<th>% of sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased self esteem/confidence</td>
<td>23.5%</td>
</tr>
<tr>
<td>Improved problem solving</td>
<td>5.9%</td>
</tr>
<tr>
<td>More social contacts</td>
<td>5.9%</td>
</tr>
<tr>
<td>More relaxed</td>
<td>5.9%</td>
</tr>
<tr>
<td>Improved insight</td>
<td>17.6%</td>
</tr>
</tbody>
</table>

To summarize, the written evaluations obtained from the men and women in this study were very positive in terms of the usefulness of the programme in recovery from PND and in their satisfaction with flow-on benefits in various areas of their lives, such as, their relationships with others. Referrers were also positive about the benefits their clients reported, and they themselves had observed in their clients after completing the intervention.

For the women in the study, their reports were consistent regardless of the intervention they received. This provides more evidence of the consistency between interventions delivered. The large majority of women rated the intervention programme as useful, with the support gained from participation, the cognitive behavioral strategies and the information about PND rated overall as the most useful. The overwhelming majority of women reported that their relationships with their infants, other children and partners had improved as a result of the intervention. Improvements such as increased tolerance, more understanding and better communication were noted.

The men listed increased understanding and increased self-awareness as some of the gains they made through participation. The large majority of men were implementing the conflict resolution skills learnt, and were offering their partner’s more emotional support after intervention. The men recommended their programme be longer than 6 weeks and that this include further practice of skills gained.
For the referrers, child health nurses, were more likely to see the women more often than GP’s. Both referrer groups requested the programme offer more groups. The majority were satisfied with the referral process and the service they and their clients had received. Over 80% of referrers reported significant or moderate improvement in their clients in terms of depression, anxiety and stress levels. Most referrers had received positive endorsement of the intervention programme from their clients. Referrers perceived the most effective components of the programme to be the psychoeducational information, the stress management strategies and the building of social support.
CHAPTER 5

DISCUSSION

OVERVIEW OF CHAPTER
This chapter begins with a general discussion, and a review of the specific hypotheses and the results obtained. A discussion of the results of the programme evaluation and recommendations ensues. This is followed by the strengths and limitations of the current study; directions for future research and final conclusions are drawn.

5.1 REVIEW OF STUDY RESULTS

5.1.1 GENERAL DISCUSSION
A the outset, women in this study struggled with the changes in roles, relationships, workload and expectations placed on them by self and others, corroborating findings of previous research (Buist, 1996a; Brockington, 1995; Feldman & Nash, 1994). Some attributed the development of their PND to these changes. For others, a host of additional factors such as excess stress, perceptions of poor support, traumatic births or prior traumas, histories of previous depression or poor physical health were involved, in keeping with the research on risk factors (Boyce et al., 1991; Cooper & Murray, 1995; Hannah et al., 1992; O'Hara et al., 1984; O'Hara, Schelte, Lewis & Varner, 1991; O'Hara, Schelte, Lewis & Wright, 1991; Nielson-Forman et al., 2000; Murray et al., 1995; Stein et al., 1989; Warner et al., 1996; Watson et al., 1984).

The impact of PND on these women and their families was pervasive. The women recounted increased relationship conflict, lower tolerance levels and reduced general functioning. The women described the experience of PND as overwhelming, isolating and shameful. Similar experiences and evidence of stigmatization have been recorded in other studies that adopted qualitative methods (Brockington, 1992; Moore, 1992; Morgan et al., 1997; Nicolson, 1998; Whitton et al., 1996). The response rate to the offer of treatment was slow to be taken up in this community. This corresponds with various studies that report a
reluctance for this client population to seek treatment (Appleby & Whitton, 1993; Boyce et al., 1993; Brockington, 1995; Cox et al., 1982; Fairchild, 1995; O'Hara & Zekoski, 1988; McLennan et al., 1996; Robinson & Young, 1982; Taylor et al., 1994; Whitton et al., 1996). However, once clients got as far as the assessment interview, they reported an enormous sense of relief and attrition rates were low, in contrast to previous research (Elliot et al., 1989; Stamp, Williams & Crowther, 1995; Whitton et al., 1996).

Men in this study reported PND having a substantial impact on their lives also. For some this was associated with increases in depression, stress and poor relationship adjustment. The men expressed feelings of frustration, helplessness, isolation and bewilderment at how to be of assistance to their partners and children echoing the findings of Barnett (1992) and Meighan et al. (1999). The strategies that had worked before were no longer working. These men were eager to soak up helpful ideas and information. Adding credence to previous clinical observations (Brockington, 1995; Buist, 1996a & Sherr, 1995), the men openly discussed the added pressure they experience in modern Australian society, as a result of the increased expectations their wives have of them to be more active fathers and partners, reinforcing previous findings (Brockington, 1995; Morgan et al., 1997; Perry-Jenkins, 1993; Rapael-Leff, 1991). Contrary to previous findings on responses to psychotherapy (Kornstein, 1997), the men in this sample maintained a good attendance rate, with a low percentage drop out.

5.2 EFFECT OF TREATMENT INTERVENTION ON PND, STRESS, RELATIONSHIPS AND SOCIAL SUPPORT (HYPOTHESIS ONE)

Hypothesis one predicted that the women partaking in either of the 10-week CBT intervention programmes would show significant improvements in depression, anxiety, stress, relationship adjustment and levels of social support at posttest, when compared to the control group.

Results indicated that experimental groups obtained significantly lower depression and anxiety scores on the EDPS, the BDI-II and the BAI post intervention than the control group, thus supporting hypothesis one for depression and anxiety. These results suggest that for women suffering with PND, 10 weeks of CBT, whether delivered in a group or
individual format, is a more effective treatment for depression and anxiety than engaging in an informal support group.

The improvements in depression and anxiety after intervention are also reflected in the programme evaluation questionnaires the women and the referrers completed at posttest. Over 76% of women reported the CBT programme was effective in helping them recover from PND. This was added to by 88% of referring GP’s, child health nurses or allied health worker’s reporting significant or moderate improvement in observed depression and anxiety levels of their clients.

The lack of progress found for the control support group in this study replicates previous findings where no significant changes in women’s depression (Fleming et al., 1992; Rowe et al., 1996) or anxiety (Rowe et al., 1996) were found after participating in a unstructured support group.

The programme was not as successful in improving levels of parenting stress, relationship satisfaction or social support across the board. Although it is evident from observation of the means that the 3 intervention groups did achieve reduced levels of parenting stress, this difference was only large enough to produce significant changes for the group ‘women only’ at posttest when compared to the control group.

However, 60% of women completing the evaluation questionnaires indicated they believed their stress levels had reduced, with 90% stating the programme had been useful in increasing their sense of control and direction in life. Further, evidence regarding stress related to the family system was found with positive responses regarding improvements in their relationships with their infant and older children reported by over 80% of the sample. Concurrently, this was again corroborated by referrer observations, with over 80% of referrers reporting improved coping with stress post intervention. Interestingly, Meager and Milgrom (1996), also failed to obtain a significant difference in psychometrically measured parenting stress post intervention.
The programme successfully improved relationship adjustment levels for groups 1 and 2 over the control group, but the individual intervention group did not achieve significantly different relationship adjustment scores in comparison with the control.

It is not evident whether the pre-intervention below average relationship adjustment seen in this sample occurred simply as a result of these couples having children, as some research suggests (Belsky et al., 1985; Waldron & Routh, 1981; Willen & Montgomery, 1993) or as a consequence of the effects of PND as suggested by others (Boyce et al., 1991; Kumar & Robson, 1984; Merchant et al., 1995; O'Hara, Schelte, Lewis & Varner, 1991; Watson et al., 1984). A longitudinal cohort study would be needed to unravel this. However, in comparison with Meager and Milgrom (1996), the current group interventions were more effective on marital adjustment.

Indeed, an overwhelming majority of women stated that the CBT programme had been effective in improving their relationship with their partner. Three quarters believed their improved communication was responsible for this, whilst 1/3 believed it was the reduction of their depression that was efficacious in improving their relationship. Finally, the intervention programme was not successful in obtaining significant improvements in level of social support for any group within the study when compared with the control group, confirming previous findings of Meager and Milgrom (1996).

In contrast, the programme evaluation questionnaire results show over 2/3 of the women who completed any form of intervention stated that they believed the programme had been beneficial in building their social support networks. Almost 3/4 believed that they had benefited from the emotional support they experienced through their programme. Referrers also commented on social support levels they observed or had their client's report back to them. Over 50% of referrers stated that the intervention had been extremely effective in building social support.

However, no significant differences were obtained between the control group and the experimental groups at posttest. Thus it appears that the intervention was not significantly more successful than the control support group at increasing levels of social support.
There are several possible explanations for these findings. Firstly, the program did not specially target parenting stress or relationship satisfaction as the primary aim. Reducing general stress levels and improving communication and conflict resolution within relationships were dealt with as components in the broader context of targeting depression. Each of these areas received one full session, and then some reference and reinforcement in subsequent sessions. These are enormous skill areas within themselves, which could, and do, justifiably have entire treatment programmes devoted to them. It may be that sufficient time and attention for major change in these areas was not given in this intervention.

Another possible explanation concerns the lack of follow-up testing available between the control group and the intervention groups. Only pre and posttest assessments are available for these groups. It may be that for significant differences to arise between the intervention and the control, some consolidation phase needs to occur. It is possible that rather than the CBT intervention not being significantly better than the control, regardless of whether it is delivered individually or in group or with the partner involved, it is simply that not enough time has passed to allow the benefits to establish themselves sufficiently to show up in the measures taken. Given that these women are attempting to overcome their depression and are working successfully at ways to do this, it may take longer for their efforts to translate into the more complex areas of parenting stress and interpersonal relationships. After all, the women are not entirely in control of these other areas, their partners and children are also contributing players in the system. It is plausible that if measures for the control group were taken over the 6-months follow-up, as they were for the intervention groups, these changes may have been detected.

No significant differences were found in levels of social support post intervention. It was anticipated that the women in the 10-week CBT programme would rate their social support levels as improved over those of the controls. This did occur, but was not of sufficient magnitude to prove significant. Although the intervention emphasized the importance of building and maintaining social support, and addressed strategies to achieve this, this did not produce large enough change.
Possibly, this is due to the fact that the control group was itself a support group. It is likely that these women were also obtaining increased levels of support from participation in their support group. This would not be surprising, as this is one of the major functions of support groups. Thus the lack of significant social support improvement may in fact be an artifact of the control group used in this study.

An alternate explanation is that the SSNI instrument used to measure levels of social support was not sensitive enough to reflect the changes made in social support. Indeed, both the women themselves and their referrers reported observing improvements in this area. Certainly, one of the potential problems with the SSNI is the low numerical value of the mean. Thus requiring very large item score changes before it is reflected in the final composite score. As previously discussed in the method section, it is well recognized that psychometrically sound measures of social support are sorely needed within psychological research (Ayers, 2001; Brugha et al., 1998; Flaherty et al., 1983; Lazarus et al., 1985; Stansfield & Marmott, 1992).

Another explanation is that these results may be an artifact of the general reduction in social support levels that have been found for all new mothers over the first postpartum year (Gjerdingen & Challoner, 1994).

5.3 EFFICACY OF GROUP CBT IN COMPARISON WITH INDIVIDUAL CBT (HYPOTHESIS TWO)

It was predicted that women receiving any form of CBT group intervention would attain significantly improved levels of depression, anxiety, parenting stress, relationship adjustment and social support than women who received the individual CBT intervention. The rationale for this was, given all women were receiving the same CBT programme, women in the group environment have a number of therapeutic advantages over women receiving one-to-one therapy. To begin with, the group environment provides a ready-made social support network. These women do not have to go out and cultivate support.

Secondly, the group aimed to provide an environment where normalization and destigmatization could occur. The women could provide support for each other, as well as more realistic standards. For example, "if other women were rescheduling their day to
include pleasant activities, then it is okay for me to do it”. Additionally, as the group cohesion and trust grew, it was anticipated that the peer reinforcement would provide an additional benefit for therapeutic change, beyond the primary therapist. That is, sometimes peer influence can be more powerful than the therapist, as clients may hold a belief that 'therapists say things because that is their job, but if it comes from one of us or many people in the group, it must be correct.'

It appears that being part of a group, is an advantage, but it is not a straightforward picture. For this sample of women, reduction of their depression was initially best served by belonging to the CBT group intervention where their partners did not receive any treatment. At 3 months the group interventions did not significantly outperform the individual intervention for depression. This altered by 6-months, where the greatest significant reduction in depression was seen with women who received CBT group with their partners involved in the 6 week men's group, when compared to individual therapy. Group interventions proved to be superior over individual therapy for anxiety reduction over the longer term, with effect detected at 6 months follow-up.

It is not surprising that depression and anxiety levels follow a similar pattern, given their close relationship. Perhaps what is occurring, is that initially, not having her partner involved, simplifies what the woman needs to focus on for recovery. No additional issues are being raised by her partner increasing his knowledge and having an opinion on PND. She is not put under any additional stress because she and her partner are not closely looking at their relationship, the way they communicate with each other and the way they choose to parent. It may be that some time is needed for the added benefit to surface. These women need to consolidate the changes that having their male partners involved will raise, before the anticipated benefit of teamwork occurs.

Being part of a group significantly reduced levels of parenting stress at the 6-month mark for women. However, again although the women whose partners were involved did reduce their levels of parenting stress, these reductions were only large enough to be significant for the group ‘women only’ intervention, perhaps providing support for the above explanation. Women's stress levels reduce most when they have peers to share with and provide realistic comparisons for their own parenting practices. Thus, they feel more
confident about their child rearing and they feel they are getting on top of their depression. The women only group also had the best improvements in depression immediately post intervention. It is possible that for complex constructs such as parenting stress, depression levels need to improve before women recognize that there are changes in the parent child system. It makes sense, that there would no doubt be a lag time before interactions between the infant and their parent and other children were noticeably improved. Hence, if this is correct, it would be predicted that if the study had followed families beyond the six months, parenting stress levels would have dropped even more, especially for the women plus partners group over time.

Group interventions showed larger improvements in relationship adjustment than individual intervention, but only if partners participated in the men's group, implying that more than just one member of the couple was needed to increase adjustment. What was unexpected was that this took longer than originally predicted to occur. The results indicated that this difference only became significant at the 6-month follow-up. These findings mirror that of Misri, Kostaras, Fox and Kostaras (2000) who also found improved relationship satisfaction for women whose partners had been involved in intervention.

Unexpectedly, the group intervention did not significantly increase level of social support at any post intervention measurement point. For this sample, women receiving individual therapy were no different in levels of social support than women in the groups. It may be that as discussed above, the SSNI was not sufficiently sensitive to display these changes.

What seems to be more plausible, if the intervention group means are closely inspected, is that increases in social support occurred for all interventions post treatment, but the increase only remained at 6 months for the group plus partner. For the individual intervention, immediately post treatment the social support increased, which is perhaps related to feeling more supported as a result of the 10-week treatment. This gradually dropped off over the follow-up period, because contact with the service and the therapist discontinued, save for follow-up measures and reminders being mailed out.

For the group interventions, the women were encouraged to continue contacting each other. Facilitators suggested that the women exchange contact numbers and meet
fortnightly or monthly after the intervention concluded. It seems that this resulted in stabilized social support levels for the 'group partner involved' intervention, but after an initial post intervention high, social support fairly dramatically fell away for the group women only, indicating that participation in groups alone does not provide enough support to shift social support levels. Perhaps the women were aware that the benefit of having empathic peers around them was to be time limited, and this needed to occur for a longer time period to be solidified as part of one's social support network.

As no other studies in the literature have tested individual and group interventions together, comparisons cannot be made with previous results.

5.4 EFFECTS OF INCLUDING PARTNERS IN INTERVENTION (HYPOTHESIS THREE)

It was anticipated that women who received the group intervention and whose partners received the 6-week men's group would outperform the women who received either the group alone, or the individual CBT programme. These women would have the benefits of group intervention and the added benefit of the support, increased understanding and reinforcement from their partners.

Women did not recover faster from PND because their partners were included in the intervention, but they maintained their recovery better and continued improving when followed up over 6 months.

These quantitative findings are supported by the focus group interviews. Analysis of the content of the interviews suggests no great differences in the women's feedback regarding their levels of change in depression and anxiety. Both groups talked freely about positive changes they had noticed in their moods, thinking styles, expectations and day-to-day behaviors, similar to the findings of Kowalski and Roberts (2000). Regardless of which group intervention they received, women reported a renewed and stronger sense of self, which was recognized by others, for example:

"Yeah, because I'm a lot stronger now. And actually my husband pointed it out last week that he can see I'm more confident and he...he thinks it's fantastic I'm back. He says I've got that spring again!" (group women only)
These findings are different to those of Misri, Kostaras, Fox and Kostaras (2000) who found that inclusion of partners significantly improved women’s depression levels, relative to the women only intervention. However, the intervention in this study consisted of 7 psychoeducational visits, which is quite different to a 10-week structured CBT group programme. Morgan et al. (1997) conducted a more comparable intervention; an 8 session group for women, where partners were invited to 1 session. Obviously, it is a long bow to draw comparing 1 session for men with 6, however similar findings were obtained. No significant difference occurred in depression recovery rates for women whose partners attended the one-off session in comparison with women whose partners did not.

Contrary to expectations, inclusion of partners did not result in significantly lower parenting stress levels at any time post intervention, if anything, the trend was towards increases in stress levels. Analysis of the focus group interviews again illustrates that regardless of which group intervention was received, the women reported improvements in areas related to parenting stress. Specifically, the women talked about changing their own expectations of themselves, to more realistic ideas that translated into altered parenting and caregiving practices for example:

"I have stopped ironing baby's bibs and towels, next is sheets and pillow cases!" (group plus partner)

The women reported improved behaviour management of their children:

"my kids are the same... I've changed towards them. They haven't changed. They're the same, but I think I'm more tolerant." (group women only)

Perhaps these women found that they had more to contend with, with their partners involved than those whose partners were not as familiar with what the women were covering in their programme. Perhaps including the men meant they too were now expressing opinions on child rearing and handling and family matters that were recognized as informed opinions, or at least opinions that had more credence than prior to intervention, thus, creating more for the women to consider and incorporate in day-to-day life. In fact, the focus group interviews provide some hint that this may be occurring. Some of the women whose partners participated in the men's group alluded to experiencing some additional pressure from their male partners to progress their recovery process (see page 223).
181 results section). It may be that, at times, using a family approach heightens performance pressures for the primary patient, hence increasing stress levels.

Unexpectedly, the in benefit of having partner's included in intervention on relationship adjustment was delayed until the 6-month mark. Certainly, looking at the evidence collected from the focus group interviews, it is clear that the women whose partners participated in the intervention reported substantial improvements in their relationships with their partners and valued their inclusion. One such example was:

"... because if I had done this on my own without him coming in and saying 'how was your Wednesday?' and I would have gone 'fine'. That would have been it- he would never, being quieter, ask more - that's not him. So definitely our relationship has benefited the most out of it."

To add to this argument, the women in the women only group almost unanimously recommended that male partners be included in treatment. Interestingly, the qualitative information may shed some light on this delayed benefit. Even though the men were not included in the intervention, the women in the 'women only' groups also reported enormous shifts in their intimate relationships. Indeed, some went as far as stating that as an indirect result of the improved communication and functioning they experienced as they recovered from their depression, their relationship had been saved. It also seems that for a proportion of male partners who were not involved, some 'rub off' effect occurred through their wives' participation. PND was seen as legitimate, and perhaps as a consequence, they were more supportive. Certainly this is not entirely surprising, as the researcher and the facilitator encouraged the women to be open about what they were doing in the CBT programme and to discuss issues with supportive family members. For example:

"It certainly made my husband more aware of what it's all about and what it's not - I think actually being able to go to a course made him realize that it is not just something I'm imagining. It's a real situation... it's not made up or anything"

Perhaps this accounts for the lack of large differences between the women only group and the partners included. However, as time progresses it may be that the knowledge and skills the men gained from participation ensures longer lasting relationship improvement and family cohesion.
Social support levels at the 3-month mark proved to be significantly higher for women whose partners were included, when compared to women in group with no partner inclusion. Thus, having their partner involved for this sample meant that, at least in the short term, these women felt more supported. It is likely that because the women had socialized together and their partners had grown to know each other, that these couples would be more likely to meet up socially after the conclusion of the treatment. This is, in fact, what was reported. Both subgroups 1 and 2 had organized at least one family picnic and barbeque that the researcher had been advised of by subjects. Including both partners seems to have the benefit of breaking down barriers to improved social support. Unfortunately, this benefit did not last without maintenance; it fell away at the 6 month mark.

It was thought that having partners involved would lead to increased social support, this was not apparent at posttest or at 6 months. Again several reasons could account for this. Firstly, the by-product of partner inclusion was obviously not strong enough to make significant changes on the social support instrument used in the study. Secondly, what the SSNI doesn't clearly tell us is whether the source of support had altered. Potentially the men involved in the treatment, may now be the primary source of support for their wives, whereas this may not have been the case previously.

Alternatively, perhaps, the women may have had mixed feelings about the support their partners were providing, given they were not significantly less stressed than the women in the group women only intervention.

Using Levitt's (1991) model, it may be that the increased support the men are providing has not yet exceeded the expectations of the women in this sample. Remembering that, according to Levitt, social support levels will not appreciably increase until this occurs.

Another explanation emanates from the focus group information. It appears, regardless of intervention type, women felt more supported post intervention than prior to it, due to the increased legitimacy in the eyes of those around them of PND and its consequences. The
fact the women were engaged in professional treatment may have been enough to rally supporters to provide more support.

5.5 BENEFIT TO THE MEN OF INCLUDING THEM IN THE INTERVENTION (HYPOTHESIS FOUR)

It was hypothesized that men who completed the 6 week CBT group would show improvements on depression, parenting stress, relationship adjustment and social support when compared to men who received no intervention.

Prior to intervention, 18% of the sample of men in this study met the cut off point for major depression (Beck et al., 1996); this fell to 2% post intervention. This pre-intervention figure is higher than that found in the most recent well designed Australian studies, where Matthey et al. (2000) and Morse et al. (2000) found around 5 to 6% of new fathers with depression. However, it is closer to studies that measured comorbidity of couples, where 9%, 12.5%, 33% and 42% of men were found to be depressed postnatally if their wives were (Ballard et al., 1994; Harvey & McGrath, 1988; Lovestone & Kumar, 1993; Raskin et al., 1990).

Several reasons for a higher than normal level of depression in these men can be proffered. Firstly, these men are more likely to be in strained relationships (Boyce et al., 1991; Kumar & Robson, 1984; Merchant et al., 1995; O’Hara, Schelte, Lewis & Varner, 1991; Paykel et al., 1980; Watson et al., 1984) as was the case in this study. Secondly, statistically living with someone who is depressed means it is more likely that you will be depressed also (Kuipers, 1992). Thirdly, as Harvey and McGrath (1988) state, there are increased demands when one member of the partnership is not functioning optimally, which on top of the usual stresses and strains of having a new baby, could explain the higher rates for the men in this study.

The hypothesis was upheld for levels of depressive symptomatology at posttest, but not at the follow-ups. It is no wonder that the men in the group did not achieve significantly different levels of depression in comparison with the control at 3 and 6-months, because their scores were so low, in any case. What is more important is that the men in the
experimental group maintained their low scores up to 6-months post intervention, indicating maintenance of change. It is also true that the control group reported very low scores on the BDI-II. It is proposed that some underreporting was occurring in this group, as it makes no sense that this group should be less depressed to begin with than the others, when their wives were equally as depressed.

The qualitative results reinforce the quantitative findings. Although the men did not specifically refer to their own levels of depression in forums, they did talk about changes in symptoms and behaviours related to depression. For example, improvements in stress management, reduced conflict, improved problem solving and reductions in feelings of isolation and frustration were detailed. This compares well with previous research documenting a gender difference in reporting of depression by men (Brems, 1995; Wilhem & Parker, 1994).

In combination, stress levels significantly reduced for the men's group participants. This may have been as a result of depressive symptomatology waning or as a result of participating in an open forum with peers where worries and concerns could be problem solved within the group. Reported social support also significantly increased at the 3-month mark in comparison with controls, implying the group assisted with feeling more supported. Their wives also scored highest on social support at this time.

Review of the programme evaluation questionnaires, supports an improvement in stress management. Forty percent of the sample reported they had gained information on stress management due to participation in the group. The qualitative results also indicated that the men were more aware of their own stress triggers, and as a result of their participation in the group, were more likely to seek help and share concerns that were troubling them with trusted others and trial new skills and strategies for improved functioning.

These men did not indicate any significant changes within their relationship over the 6 months as a result of their participation in the intervention. It may be that the intervention was not specifically targeted enough on relationship issues to have made a substantial difference. Or, as suggested previously, not enough time has elapsed to detect the changes in this area.
These quantitative findings do seem at odds with the qualitative information. Over half the sample cited relationship skills as gains from their participation in the men's programme, and that their participation had had a direct positive effect on their partner's moods. This was followed by 40% stating they were offering more practical support, and 60% stating they were offering more emotional support to their partner's post group, all factors that ostensibly should lead to improved DAS scores.

The men even recommended further time be spent rehearsing skills and strategies learnt, and wanted couple counselling included in the future programmes. This may provide a clue to the unexpected results. Perhaps the relationship work tackled, highlighted areas of need that the men had previously not been aware of or didn't know how to tackle. So, although the men felt their relationship had improved, it may be that they also recognized that a lot more work and consolidation needed to occur, and the programme really had only provided an introduction. Hence, the DAS scores did not improve sufficiently to be statistically significant. Of interest, is that these findings are similar to those of Misri, Kostaras, Fox and Kostaras (2000), where men's DAS scores decreased post intervention, even though their wives showed recovery.

5.6 EVALUATION OF THE INTERVENTION PROGRAMME

The CBT programmes conducted within this research were evaluated through questionnaires completed by both subjects and referrers and through the focus group interventions. The results of these evaluations are discussed below.

5.7 STRENGTHS OF THE PROGRAMME

5.7.1 OUTCOMES FOR PND

A primary indicator of the success of a programme would surely be whether it achieves what it sets out to do. Above all else, this programme set out to reduce levels of depression and anxiety in the postnatal period. The CBT programme, no matter how it was delivered, was most successful in this aim. All interventions achieved significantly lower depression and anxiety scores, at posttest and follow up, with the exception of the 6-month follow-up
for women receiving the individual intervention. Here, the significant reduction in anxiety levels did not hold.

Attendant successes were: the reductions in parenting stress for all interventions at all testing points, even though these reductions did not always prove to be statistically significant; the increases in relationship adjustment for all interventions, apart from the individual intervention at 6 months where their relationship adjustment fell; and, lastly, the improvements, albeit often non significant, in social support levels that occurred post intervention and at follow-up points.

This is the first study in the literature to attempt to target and adequately measure depression in male partners of women with PND. The men's programme proved to be successful in reducing depressive symptoms and levels of parenting stress. Improvements, although not significant, were made in relationship adjustments as a result of the intervention. Higher levels of social support were also achieved, reaching significance at the 3-month follow-up.

5.7.2 PROGRAMME STRENGTHS ACCORDING TO WOMEN

Most importantly, the large majority of women who participated in the interventions this study offered, perceived them to be of great help in their recovery. Worthy of some mention is that, on the whole, the women genuinely enjoyed participating in the programme. Obviously, if an intervention is not palatable and of reasonable face validity to clients, it will not be taken up as readily.

The women recognized and valued the increases in emotional support they experienced, the increases in self esteem and the reductions in depression, anxiety and stress, congruent with the previous findings of Fairchild, 1995; Gruen, 1993; Kowalski & Roberts, 2000 and Morgan et al., 1997. This was accompanied by changes in their belief systems, self-expectations and increases in self-awareness. A consistent theme within the interventions was the improvements women noticed in their relationships with children, partners and family members.
The women were asked to rate the most effective programme components. The psychoeducational information was rated as the most effective component, followed by the cognitive restructuring, the handouts, problem solving, communication and relationship skills and pleasant activity scheduling. This compares well with the focus group reports, with the specific mention made of the cognitive behavioral model, the honesty, acceptance and confidentiality within the group as effective components.

Inclusion of the male partners was overwhelmingly recognized by the women as being of enormous benefit to their recovery from PND. For the women whose partners were not included, recommendations that this occur for future clients were made. These findings add momentum to calls by professionals for inclusion of men in treatment (Apfel & Handel, 1999; Boyce, 1994; Buist, 1996a & 1998; Kowalski & Roberts, 2000; Misri, Kostaras, Fox & Kostaras, 2000; Watts & Pope, 1998).

The organization and structure of the programme was seen as a strength by the women. The women found it useful to have a set agenda and to work to a session plan, albeit a flexible one. The fact that the programme was run by qualified professionals was seen as a strength and added credibility and a sense of safety to the programme.

Both men and women reported that their participation on the programme had assisted in breaking down the stigma and isolation they had experienced with PND. Their shared experience also inspired many of them to begin thinking about practical ways to increase community awareness and break down the barriers of isolation and shame.

5.7.3 PROGRAMME STRENGTHS ACCORDING TO THE MEN
The men cited the factual information, relationship skills, the time and stress management strategies, the ability to share experiences and openly discuss problems as the most useful programme components.

It is evident from the focus group interviews that being involved in a men's group programme, that gave them the opportunity to raise concerns and be listened to, was a novel experience for all the male participants. The inclusion of a men's programme was highly regarded by the men. Supporting the assertions of Barrows (1999), that men are
increasingly prepared to engage in therapy, the men were pleased to be included and were surprised at how useful and enjoyable the experience had been for them.

Having both male and female facilitators was flagged as a strength of the programme by the male participants. They believed this provided the best combination of views, which was important to them. The men also commented on the organization and structure of the group programme as a strength.

5.7.4 PROGRAMME STRENGTHS ACCORDING TO REFERRERS
Primarily for referrers, the effectiveness of the programme was a strength. Referrers want to be able to offer their clients treatments that will assist them to recover. Over 90% of referrers reported satisfaction with the intervention, signally a major strength of the programme. A community programme such as this is only effective if it is recognized by health and allied health professionals as being useful. If no one refers, the programme doesn't get off the ground.

Close to 90% of the GP's, child health nurses and allied health professionals reported being satisfied with the referral process. The referral process was deliberately made as flexible as possible in this study. Referrers could phone, fax or mail referrals through. In addition, they could directly send their clients to the programme. Lengthy and time consuming referral forms were not required. This proved to assist in the smooth flow of referrals and, perhaps, increased the number of referrals made.

In terms of efficacy of programme components, referrers considered the psychoeducational information, the stress management strategies, and the building of social support networks as the most effective components in the recovery process. It is not known how the referrers came to their decisions, whether they had actually asked their clients or whether they had rated components from their own knowledge base. This is a flaw in the evaluation questionnaire, which needs to be addressed.

5.7.5 PRACTICAL STRENGTHS OF THE PROGRAMME
The importance of a number of practical issues regarding programme implementation need to be highlighted as these possibly contributed to its success.
Firstly, experienced mental health practitioners, with group and individual therapy skills and experience, conducted these programmes. This assisted in ensuring the success of the interventions, and has not always occurred previously (Holden et al., 1989; Wickberg & Hwang, 1996). The therapists were familiar with current best practice therapeutic methods and worked well together as a team, constantly consulting with each other and the PMHS consultant psychiatrist as required. This meant, for example, that if issues such as suicidal ideation were detected, suicide risk assessments could be conducted on the spot and appropriate action taken.

The researcher/primary therapist had worked within the mental health arena within this community for several years and thus had an established identity and credibility. It is likely that this contributed to the acceptance and the support the programme received in the Peel region.

Wide community consultation occurred prior to the programme being launched. A need for a structured treatment programme was clearly determined. Continual promotion and dialogue with stakeholders occurred throughout the life of the programme. This ensured that the programme was supported by referrers and the PMHS.

The programme was established with clear referral, assessment and case management pathways pre-determined. All subjects underwent a clinical interview prior to entering any treatment intervention, which served two functions: firstly, to provide an accurate diagnosis and, secondly, to begin establishing a therapeutic relationship with the researcher/primary therapist. Formal diagnoses have been lacking in some previous research (Fairchild, 1995; Morgan et al., 1997; Rowe et al., 1996).

Subjects were provided with a consistent and co-ordinated service delivered by a small team of professionals. At all times they knew who they could contact directly, should the need arise. This meant a personalized service could be provided. For example, the researcher rang the group members prior to each group to motivate attendance and to check on any transportation difficulties.
The interventions were established with clear guidelines determined in a collaborative manner by the subjects and the therapists. For example, group guidelines included confidentially, being on time, being non-judgmental and respecting personal space and healthy expression of feelings.

A crèche was provided free of charge for mothers. As evidenced by the strong response in the focus group interviews, absence of a crèche that the mothers felt comfortable with would have deterred participation. A factor for future research to consider is the orientation the crèche staff are provided with. The researcher and facilitators thoroughly briefed the crèche staff about the nature of the programme, the client population they would be encountering and provided them with factual information concerning PND. This study was fortunate in that not only were the crèche staff extremely competent and understanding, the same crèche staff were employed throughout the course of the study, thus providing continuity for the women and children.

Finally, and perhaps most importantly, this study attempted to address the absence of a systemic approach to PND treatment. This has been repeatedly called for by clinicians and researchers alike (Barnett, 1992; Buist, 1996a; Kumar et al., 1995; Leathers et al., 1997; Matthey et al., 2000; Morse et al., 2000; Whiffen & Gottlib, 1993).

5.8 WEAKNESSES OF THE PROGRAMME
Both male and female subjects consistently recommended a longer programme. It was suggested this time be used to practice and consolidate skills and strategies covered in the 10-week programme, more focus on relationship issues was recommended and it was recommended that the relapse prevention work be introduced earlier and receive more coverage. Given adequate resources, at the end of the 10-week programme a monthly meeting could be implemented that focused on maintaining gains and relapse prevention. This would seem particularly sensible with this client population, who may have further pregnancies, and therefore according to the literature be at 50% greater risk for reoccurrence of depression (Bagedahl-Strindlund & Ruppert, 1998; Davidson & Robertson, 1995; O'Hara, Schelte, Lewis & Varner, 1991).
A separate function that participants were seeking was one of maintenance of the support they had experienced, in order to maintain progress and facilitate further development. This could be viewed as an area that requires further focus.

Improvements could have been made to the amount of feedback provided to referrers. Referrers were sent standard feedback letters, and given verbal reports on an ad hoc basis. However, they indicated they would have liked more lengthy reports. This was preferable, but not possible, due to the enormous workload this programme generated, given the time resources the researcher had available.

Some referrers requested more immediate crisis management for clients. However, the researcher believes this is beyond the scope of the treatment programme. Incorporation of a crisis management service would significantly change the focus of the treatment programme and divert resources into another area that is best catered for by the existing acute mental health services.

Finally, not all programme components ‘hit the spot’ for all subjects. Individual subjects stated that, for example, the progressive muscle relaxation exercises were difficult for them, or that they were not keen on the homework. A drawback of structured programmes is that they are not individually tailored to clients, and clients will benefit from some components more than others.

5.9 METHODOLOGICAL STRENGTHS OF THE STUDY

This study attempted to address flaws in past research and include innovations not previously reported in the literature. To achieve this the following strategies were employed.

The study adopted a pre test posttest control group design that followed subjects over 6 months. This design increased our confidence that the treatment variable was responsible for the differences observed and enabled changes to be tracked over time.

Detailed information was collected on well researched risk factors for all subjects who were assigned to groups through matching on these characteristics. This information was also collected for those who were not eligible for the study and for those who dropped out of the
study, to ensure comparability, hence addressing a criticism levelled at previous studies (Condon & Corkingdale, 1997).

Confounding factors that obscure treatment effects, such as subjects receiving other forms of intervention whilst in the study, did not occur in this research, increasing confidence in the intervention outcomes.

A well described and replicable intervention was employed that used experienced and trained mental health professionals (Boath et al., 1999; Gelfand et al., 1996; Holden et al., 1989; Rowe et al., 1996; Wickberg & Hwang, 1996). This helped to ensure representativeness and integrity of the intervention and is essential for good programme evaluation (King et al., 1987; Lambert & Hills, 1994). Regular supervision and adherence to the treatment manual prevented drifting from the intervention.

The study used only quantitative measures that had reputable reliability and validity (Tabachnick & Fiddell, 1989) and had been shown to be most sensitive in assessment of this population. This improved upon the method of Fleming et al. (1992), Kowalski & Roberts (2000) and Rowe et al. (1996). Attempts to increase construct validity were made by using a multimethod approach, that is, using more than one method of obtaining data (Robson, 1993). As recommended, this study did not rely solely on self-report measures but obtained checks on validity through referrer observational ratings and through qualitative measures (Condon & Corkingdale, 1997; Cox, 1983; Marachi et al., 1999; Mattila-Evenden et al., 1996; Schade et al., 1998; Senra, 1996; Whiffen, 1997).

The study attempted to not only test various interventions for PND, but also to evaluate the programme that was delivered. This was done through both participant and referrer evaluations, as well as outcome measures.

The reliability of the study was enhanced by the fact that the treatments delivered were identical, the context and venue were the same, and therapist variables were reduced as much as possible. Past studies have not always achieved this (Boath et al., 1999; Gelfand et al., 1996; Holden et al., 1989; Morgan et al., 1997; Rowe et al., 1996) Ideally, the co-facilitators could have been the same, but it was not economically feasible in this study. Instead, the disruption caused by different co-facilitators was minimized by having the
same co-facilitators for the entire 10-weeks and having the primary therapist present throughout.

Statistical methods such as ANCOVA were adopted to hold constant pre test differences and sensitization effects, as suggested by Bonate (2000). Use of ANCOVA with pretest scores as covariates tends to have slightly higher power overall than other methods (Bonate, 2000).

Focus group experts suggest some advantages of the moderator being the researcher (Robson, 1993; Vaughn et al., 1996). To start, the moderator is already well known to the subjects, an advantage because subjects were already at ease, trusted the moderator and had formed an open relationship with the moderator. A comfortable environment had already been established. Another benefit is that the moderator had an intimate understanding of the research project and the area under investigation. Thus, the moderator fully comprehended the objective of the study and could relate well to concepts that subjects were raising. According to Carey (1995), successful focus groups rely on establishing good trust and rapport between the moderator and the group, affording the current research a distinct advantage over usual focus groups because of the strong relationship developed over time with the moderator and the participants.

The reliability of the focus group interviews was increased by conducting more than one focus group. This made it obvious if one focus group was aberrant in views and opinions and allowed for this effect to be diluted by several groups (Sim, 1998). Reliability was also increased by asking the same questions after the groups had received the same treatment (Robson, 1993).

Lastly, although some internal validity was lost in this study due to its community setting, this increased its external validity. Because the study was conducted in a real world setting, rather than a university laboratory setting, it is more likely that the results can be generalized to other populations of women with PND and their partners.

5.10 METHODOLOGICAL LIMITATIONS OF THE STUDY
A number of methodological limitations were present in this study, some of which proved difficult to avoid in community based research, but need to be considered in future studies.

Firstly, the low sample size precipitated two major flaws in this study. The inability to randomly assign subjects to treatment interventions, as was originally designed, and, secondly the reduction in power were causes for concern. The lack of random assignment threatens the internal validity of this study (Jaeger, 1990), and this is widely recognized as a difficulty with real world research (Robson, 1993). Instead, subjects were matched as closely as possible and this proved to be successful, as indicated by the lack of significant differences between groups on the broad range of variables tested pre intervention. In addition, any pre test differences not detected were controlled for by use of covariates. Ideally, however, a pool of subjects of sufficient size to randomly assign them to conditions is the preferred option.

According to Keppel (1991), small sample sizes require large effect sizes to reach significance. Because this study compared ostensibly the same intervention delivered in three different ways, it was possibly optimistic to expect large differences between interventions. Increasing the sample sizes would assist in detecting the real differences that exist.

A wait list control condition would have been preferable to the support group control used. Again, the study originally set out to recruit a wait list control, however this proved to be ethically and practically impossible with a clinical population. This is a problem that many other researchers have also found difficult to circumvent (Appleby et al., 1997; Gruen, 1993; Morgan et al., 1997; Rowe et al., 1996; Stuart & O'Hara 1995; Wisner et al., 1999). Women with PND simply and understandably do not want to wait for treatment. This observation also raises queries about the motivations of women who would be prepared to act as a wait list in this population. Perhaps they would have intrinsic differences from those who actively seek treatment.

The control group utilized in this study consisted of women belonging to an ongoing support group. In retrospect, one way to eliminate some confounds would have been for the researcher to be involved in facilitating such a group. This would have reduced confounds
such as therapist variables. This study did not follow up the control group beyond post-test, which was a flaw in the experimental design, limiting the comparisons that could be made.

Another design issue that the researcher was ethically and practically unable to control for was the use of antidepressant medication. Stipulating use of antidepressants as an entrance criterion for this study would have reduced numbers substantially, severely crippling the power available. The only available option was to carefully monitor the subjects' medication use and statistically test for significant differences. Fortunately, no important differences emerged. This problem may be avoided with larger communities where the clinical population of women with PND is greater, affording the researcher greater selection control.

Other potential threats to internal validity that apply in this study include history, or the time which passed during the treatment itself and over the course of the entire treatment phase. Fortunately, there were no major regional events that occurred that could reasonably be considered to impact on depression, anxiety marital satisfaction or parenting stress levels. Differences in depression due to seasonal changes may apply, although depression rates were not greater in winter in this study. In addition, there does not seem to be much evidence for this occurring in the southern hemisphere (Allan, Lam, Remick & Sadovnick, 1993; Terman, 1988).

Subject mortality did occur in this study. Unfortunately, measures are not available for all dropouts. The pre-test measures available indicate there were no significant differences between those who dropped out and those who completed the study. In addition, the dropout figures were not a large proportion of those who initiated treatment, suggesting no major impact on results.

Testing effects need to be acknowledged. This was unavoidable in a clinical study. It is also difficult to predict in which direction this would go. There would be some subjects who may underscore due to reticence in acknowledging real depression, anxiety, stress or marital satisfaction levels through fear of consequences or simply due to lack of insight and disconnection from their feelings. There would be subjects who potentially initially
overscored, perhaps through desperation for treatment or through a catastrophic or overly pessimistic thinking style, but later scored more realistically.

Ideally, the study could have increased the length of the follow-up period to 12 months. This would have enabled further distinction between interventions over time to be made. The results suggest that important benefits are only beginning to surface at the 6-month mark in this study. It would have been interesting to see whether these changes continued over time, especially given the limited follow up achieved in previous research (Appleby et al., 1997; Meager & Milgrom, 1996; Misri, Kostaras, Fox & Kostaras, 2000; Rowe et al., 1996; Wickberg & Hwang, 1996).

Given additional resources, the design of the study could have been extended to include partners of subjects who received individual therapy as another intervention comparison and to conduct focus groups for the subjects that received individual therapy. Some practical problems would need to be overcome in conducting focus groups for this intervention type. Namely, issues of confidentiality would need to be addressed, as these people would not have had the same grounding that the group members did in this issue. Secondly, the dynamics of the focus group interview would be different, due to the lack of previous relationship building and trust that the group interventions had already established. Nevertheless, this would give further valuable information about what treatment works best, for whom, as well as increasing the reliability of the results.

Although the psychometric measures used in this study were carefully chosen and appeared to be the most valid and reliable available, they have their limitations. The sensitivity of measures such as the SSNI, the DAS and the PSI to subtle changes in the constructs they were designed to measure was thrown into question by the multi-method measurement approach of this research. As discussed above, the qualitative results at times appeared to provide a richer picture, demonstrating change that was not identified by the measurement instruments. Perhaps this highlights the benefit of using more than one measurement method and the need for further development of more sensitive instruments.
Additional validity checks for depression recovery at post-test would have been optimal, particularly post clinical assessments conducted by the consultant psychiatrist or some form of external behavioural observations. This did not occur due to resource limitations.

The validity of the analysis of the focus group interviews could have been improved by requesting the subjects verify transcripts, as recommended by Carey (1995) and Sim (1998).

The fact that the moderator and the primary therapist were the same person introduced bias to the focus group. It is possible that the moderator influenced subjects in subtle ways she was unaware of. It is also possible that subjects were biased in their response in an attempt to please the moderator and the co-facilitators. Ideally, this would have been avoided by use of an external moderator, but would have resulted in a trade-off in benefits already described (Vaughn et al., 1996).

Another potential disadvantage with focus group interviews is that respondents may feel that answers are not anonymous. This can bias responses. An attempt to address this by the use of anonymous evaluation forms completed prior to the interviews occurred in this research (Carey, 1995; Robson, 1993; Sim, 1998).

5.11 FUTURE DIRECTIONS FOR TREATMENT OF PND
One of the important issues this study investigated was the impact of including partners in a six-week intervention programme on both women with PND and their male partners. This is the first study in the current research literature to examine such a comprehensive intervention for men. The study established that there is benefit in including partners. Men are eager and enthusiastic about being included, even though they may need more encouragement initially. Not only are men keen, once they have a taste of fairly rudimentary psychotherapeutic strategies, they want more. This is very encouraging for future clinical research in this area, if researchers are prepared to embark on interventions that may go beyond the usual call of duty. For example, working with men requires after hours work, and some persistence in following them up and coaxing them along to begin with. The ability to be flexible in offering additional psychotherapeutic interventions, if required, is recommended.
This study investigated one particular combination, men and women within the couple receiving separate group interventions. Research is now needed to examine whether this is more or less effective than having couples together in groups for all or part of the intervention programme, and how this compares with couple counselling or individual counselling for each member of the couple.

Another area that requires investigation is maintenance of treatment gains. This study followed subjects up for a period of 6 months after treatment concluded. Very few studies have addressed longitudinal changes. This is an important area to address as one of the major benefits of psychotherapeutic approaches over pharmacotherapeutic approaches is skill acquisition, so that even when treatment ceases, the skills and strategies learnt continue to be applied in everyday life, maintaining gains and preventing relapse.

Researchers embarking on intervention programmes such as the one conducted in this study need to ensure that the programme will be accepted and properly supported within the community setting. No doubt much of the success of this programme can be attributed to these aspects. Support means: adequate staff coverage, consistency of staff, access to senior consultants, built-in supervision, appropriate facilities, including provision of a on site crèche, and a proven need within the community.

Both men and women in this study strongly called for improved community awareness of PND and its impact on the family system. It was suggested that if factual information about the disorder was more widely promoted, the stigma and shame surrounding PND may be reduced, and more families may come forward for treatment. There is no easy way to determine the exact number of women in the Peel region who had PND at the time of this study. The community profile is somewhat similar to Griepsma et al. (1994), where figures much higher than the usual 10-20% prevailed. Ways to improve willingness to seek treatment need to be addressed.

Participants strongly recommended the community antenatal education classes be reviewed, reinforcing views of experts (Buist, 1996a; 1996b; 1998; Buist et al., 1999;
Holden, 1991). It may be that improvement in this area facilitates decreases in stigma and improved awareness.

The fact that women in this study, who later received a diagnosis of PND, had to raise the issue of PND with their Health Provider themselves, and ask if they could attend the intervention programme, is cause for concern. This adds to the evidence that points to poor detection rates by health professionals (Boardman, 1987; Gunn et al., 1998; Hearn et al., 1998; Small et al., 1997) contributing to a lack of funding provided for services, a concern raised by Hearn et al., 1998, Pope and Watts (1996) and Watts and Pope(1998).

5.12 CONCLUSIONS
PND adversely affects the quality of family life. It occurs at a fundamental time for the optimal social, cognitive and emotional development of infants (Bloomquist et al., 1996; Caplan et al., 1989; Cichetti et al., 1996; Coghill et al., 1986; Murray, 1992; Murray & Cooper, 1997; Murray, Fiori-Cowley, Hooper & Cooper, 1996). PND is affected by, and negatively affects the marital relationship (Areias et al.,1996a; Ballard et al.,1994; Marks et al., 1996). For at least half, PND will reoccur with subsequent children (Whiffen & Gotlib, 1993).

Although PND has long been recognized by those involved in women’s health, a diagnostic classification debate exists. A positive by-product of this is the increased focus on critically evaluating treatment for PND.

The sample studied in this research was representative of an Australian semi-rural/coastal community. The couples were not affluent or highly educated, nor were most familiar with psychotherapy. Unlike many other studies, the sample did not consist of first time parents only, broadening applicability.

This study provided an innovative approach to secondary and tertiary prevention of PND. It compared different methodologies, including a systemic approach, and obtained feedback on the treatment efficacy using quantitative and qualitative data from both participants and referrers.
No one aetiological model seems to be able to explain the development of PND for all women in the study. It seems more likely that different models fit best for different individuals. Certainly, the psychosocial model (Buist, 1996a; Moore, 1992; Thurtle, 1995) appears to have the most currency. The sample recorded a number of predictive risk factors for PND, such as poor social support, relationship conflict, excess stress and personal or family histories of depression. The women related well to the CBT model, and identified the presence of cognitive distortions and dysfunctional schema in their thinking.

Some aspects of the experiences reported by women in this study fit well with the Feminist understanding of PND (Broom, 1992; Nicolson, 1998; Oakley, 1986; Sherr, 1995). Women certainly struggled with the contrast between society's ideals and day-to-day realities. The changes in their appearance, energy, libido, identity and earning capacity created distress for many.

Many men in the study were not coping well, with either the transition to parenthood, their partner's PND, or both, mimicking the responses predicted in the social interactional model of PND (Kraus & Redman, 1986) and showing up in elevated rates of depression.

These findings have important implications for clinical practice and research, and emphasize the importance of directing adequate resources into systemic approaches to treating PND. The superiority of structured CBT interventions over unstructured support groups was upheld for PND recovery in this study. Group CBT proved to be more effective than individual CBT for depression and anxiety only. The value and importance of including men in intervention for PND was highlighted. For women, it meant significantly better outcomes over the long term for depression, anxiety and relationship adjustment. Social support levels were better when partners were included in intervention, however, this benefit did not last over time. For men, inclusion in intervention meant significantly lower levels of depression and parenting stress, and higher levels of social support. These results were verified by health care professionals who had referred the subjects. Importantly, both participants and referrers were satisfied with the intervention programme, and reported it to be useful in treating PND.
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Information about medications

In order to assess the various changes you are making in your life and accurately determine what treatments are working best for you, we are asking all participants to let us know their medication details. It is also important to let us know if you change or stop taking your medication for some reason. This information, like any information you give, is strictly confidential and will be kept on your file.

Name:
Date:

I am currently taking the following medication:

1. 
Dosage
Times per day
How long have you been taking this medication?

2. 
Dosage
Times per day
How long have you been taking this medication?

3. 
Dosage
Times per day
How long have you been taking this medication?

4. 
Dosage
Times per day
How long have you been taking this medication?

5. 
Dosage
Times per day
How long have you been taking this medication?
PATIENT INFORMATION SHEET

PEEL POST NATAL DEPRESSION TREATMENT PROJECT

Dear Participant,

As you are no doubt aware, Post Natal Depression can cause significant disruption to your life, your ability to enjoy your experience of motherhood, your relationships with your partner and your friends and family.

The Peel Post Natal Depression project was initiated to investigate and compare different treatment approaches to reduce the symptoms of Post Natal Depression. The aim of this, in a nutshell, is to find out what works best, for which people. This project is especially interested in taking a family approach to dealing with Post Natal Depression and therefore requests the willingness of your partner to also be involved.

The project is being coordinated by Sarah Davey, a PostGraduate Doctor of Clinical Psychology Student at Murdoch University in conjunction with the Peel Community Mental Health Service.

If you decide to participate, you will be offered either Cognitive Behavioural Group or Individual therapy for a period of 10 weeks. All participants will be randomly assigned to the different treatment groups. Your partner also needs to be prepared to participate in a 6-8 week group for fathers. There is a chance however, that this participation will not be required.

Cognitive Behavioural Therapy is based on principles of learning theory, which suggests that over time we can develop faulty habits in the way we respond to the environment that can increase symptoms of depression and anxiety.

Cognitive Behavioural Therapy is a two pronged therapeutic approach. Firstly, Cognitive Therapy looks at the relationship between your thoughts, feelings and behaviours and encourages recognition, challenging and replacement of unhelpful thought processes. Behavioural treatment techniques involve learning strategies such as breathing and relaxation exercises, self nurturing activities, increasing the number of pleasant activities in your life and problem solving strategies to target depressed mood.

Your participation in this project will provide you with the opportunity to learn more about Post Natal Depression and discuss your experiences of life and parenthood. You will also be provided with a range of strategies for dealing with depression and some practical steps for making your life and relationships more enjoyable. Although we are confident that your participation in this project can assist you in your healing process, we can offer no guarantees.

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You will also have a Mental Health Professional to contact if you are having difficulties or concerns outside of the group or individual counseling sessions.

In order to measure the effectiveness of the treatment offered, you will be asked to fill out questionnaires about your current feelings at the beginning of treatment, immediately after treatment and 6, 12 and 26 weeks after completing the programme. This information will remain strictly confidential at all times.

You will be encouraged to make your General Practitioner aware of your participation in this project, and we will request your written permission to keep them informed of your progress.

If you are currently, taking prescribed medication, this will not affect your ability to participate in the project.

This project has been approved by the Fremantle Hospital and Health Service Human Research Ethics Committee and by the Murdoch University Human Research Ethics Committee. Should you have any questions regarding this please call 93606677.

Your participation is totally voluntary, and you are able to withdraw from the project at any time. If you choose not to participate in the study, your treatment will not be prejudiced in any way.

At the end of the programme, you will be referred to additional services to best meet your needs, should that be necessary.

Should you have any queries regarding this research please contact Sarah Davey on 95318080 or 95358263, Dr Suzanne Dziurawiec (Senior Lecturer, Murdoch University) on 9360 2388 or Anthony Collier on 95318080.

Sarah Davey
BA (Psych) (Hons)
Project Coordinator

Anthony Collier
Coordinator
Peel Community Mental Health Service
CONSENT FORM

TO BE USED IN CONJUNCTION WITH THE INFORMATION SHEET

PEEL POST NATAL DEPRESSION TREATMENT PROJECT

Patient’s name:...........................................

1. I agree entirely voluntarily to take part in the Peel Post Natal Depression Treatment Project. I am over 18 years of age.

2. I have been given a full explanation of the purpose of this study and the procedures involved and what will be expected of me.

3. I agree to inform my General Practitioner of my participation in this study, and understand that the researchers will make contact with my General Practitioner throughout the course of the project.

4. I understand that I am entirely free to withdraw from the study at any time and that my withdrawal will not affect my future standing or ability to obtain future treatment.

5. I understand that all information provided is treated as confidential and will not be released by the researcher unless required to do so by law.

6. I agree that the research data gathered for this study may be published provided my name and other information, which might identify me, is not used.

Participant............................................. Date............................

Researcher............................................. Date............................

Researcher’s name

308
CONSENT FORM

TO BE USED IN CONJUNCTION WITH THE INFORMATION SHEET

PEEL POST NATAL DEPRESSION TREATMENT PROJECT

Participant's name: ........................................

1. I agree entirely voluntarily to take part in the Peel Post Natal Depression Treatment Project. I am over 18 years of age.

2. I have been given a full explanation of the purpose of this study and the procedures involved and what will be expected of me.

3. I understand that I am entirely free to withdraw from the study at any time and that my withdrawal will not affect my or my partner’s future standing or ability to obtain future treatment.

4. I understand that all information provided is treated as confidential and will not be released by the researcher unless required to do so by law.

5. I agree that the research data gathered for this study may be published provided my name and other information, which might identify me, is not used.

Participant............................................. Date........................................

Researcher............................................. Date........................................

Researcher's name
APPENDIX 3

PEL POST NATAL DEPRESSION TREATMENT AND RESEARCH PROJECT

Why?
Community Health Service has been a leader in regional W.A. in the area of Postnatal Depression identification, treatment and prevention for several years. An example of this is the fact that the Peel region is of the few areas in W.A. where Child Health Nurses are routinely using the EPDS as a screening tool for PND. The long established Friday morning PND support group is another example.

Research and treatment project aims to compliment existing services by providing a structured 10-week Cognitive Behavioral therapy programme for mothers and a 6-week programme for fathers. It is hoped this project will provide evidence-based research to assist in attracting funding to the region for further services.

AT?
Peel Post Natal Depression Treatment Project offers parents the opportunity to learn about postnatal depression and discuss their experience of life and parenthood. The 10-session Cognitive Behavioral Therapy programme for mothers will cover:
- Taxation and visualization exercises
- Mindfulness retraining
- Strategies to build support networks
- Acceptance, challenging and reevaluation of negative critical thinking

6-week programme for fathers will cover:
- Education of PND and causative factors
- Fathering and communication skills training
- What fathering means in 2000
- Stress management strategies

Q?
Women who are assessed to be suffering from postnatal depression and their partners (who are a major part in their recovery),
- Over 18 years old
- Able to understand English
- Willing to inform their general practitioner and give permission to keep the general practitioner informed
- Parents willing to participate in the project
- Willing to fill out evaluation forms at 6 weeks, 3 months and 6 months after the end of treatment
- Mothers up to 12 months postpartum

ERE?
- Adult Mental Health Centre, Lakes Rd Mandurah

EN?
- Tues, Wed first groups and counselling starts on 28th February 2000-May 1st
- Men's' groups and individual counselling runs for 10 weeks. Men's group runs for 6 weeks.

<table>
<thead>
<tr>
<th>Women's</th>
<th>Men's</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weds: 9am-11am, 12.30pm-2.30pm</td>
<td>Tues: evenings 6-8pm</td>
</tr>
<tr>
<td>1st round of treatment: Feb 28-May 1</td>
<td>Feb 28-April 3</td>
</tr>
<tr>
<td>2nd round of treatment: May 15-July 17</td>
<td>May 15-June 19</td>
</tr>
<tr>
<td>3rd round of treatment: July 31-Oct 2</td>
<td>Sept 11-Oct 16</td>
</tr>
</tbody>
</table>

To refer?
Further information by contacting Sarah Davey on 95318080 or 95358263 or Anthony Collier on 95318070 or 95318070.
ATTENTION NEW PARENTS!

HAVE YOU HAD A BABY IN THE LAST 12 MONTHS?

Are you one of the 20% of mothers who
ARE HAVING FEELINGS OF:
EXHAUSTION, EMPTINESS, SADNESS, HELPLESSNESS, EXCESSIVE
WORRY FOR YOUR BABY’S HEALTH, ARE YOU FINDING IT
DIFFICULT TO COPE?

ARE YOU EXPERIENCING:
LOSS OF ENERGY, SLEEPING DIFFICULTIES, MOOD SWINGS,
DIFFICULTY THINKING CLEARLY, LOSS OF INTEREST IN USUAL
ACTIVITIES?

IF SO, THEN,
YOU MAY BE INTERESTED IN THE TREATMENT AND
RESEARCH PROGRAMME WE HAVE TO OFFER.

Peel Post Natal Depression Treatment Project offers parents the
opportunity to learn more about Post Natal Depression and discuss their
experience of life and parenthood in a confidential environment.
The 10 session Cognitive Behavioural Therapy programme for mothers
will look at what Post Natal depression is and learn practical ways to
get your life back on track.
A 6-week programme for fathers/partners aimed at increasing their
understanding of what Post Natal Depression is, what impact it has on
their partners and the family functioning and explore what fathering
means in 2000 and beyond.

Who is this programme for?:
♦ Women experiencing these symptoms up to 12 months post the birth of their baby
♦ Women currently in a relationship to participate, your partner needs to be
  involved
♦ Women over 18 years
♦ People willing to keep their GP informed of their progress
♦ People willing to fill out evaluation forms before and after the programme

Contact details:

For more information contact Sarah Davey on 95318080 or 95358263

This project is supported by Peel Mental Health Service and is endorsed by Fremantle
Hospital and Murdoch University Human Research and Ethics Committees
*This is a free service and childcare will be provided for day groups.
Edinburgh Postnatal Depression Scale (EPDS)

Name: ____________________________  Address: ____________________________
Baby's Age: _______________________

As you have recently had a baby we would like to know how you are feeling. Please underline the answer which comes closest to how you have felt IN THE PAST 7 DAYS, not just how you feel today.

Here is an example already completed

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

This would mean “I have felt happy most of the time during the past week”

Please complete the other questions in the same way.

IN THE PAST 7 DAYS:

1. I have been able to laugh and see the funny side of things.
   As much as I always could
   Not quite so much now
   Definitely not so much now
   Not at all

2. I have looked forward with enjoyment to things.
   As much as I always did
   Rather less than I used to
   Definitely less than I used to
   Hardly at all

3. I have blamed myself unnecessarily when things went wrong.
   Yes, most of the time
   Yes, some of the time
   Not very often
   No, never

4. I have been anxious or worried for no good reason.
   No, not at all
   Hardly ever
   Yes, sometimes
   Yes, very often

5. I have felt scared or panicky for no very good reason.
   Yes, quite a lot
   Yes, sometimes
   No not much
   No, not at all

6. Things have been getting on top of me.
   Yes, most of the time I haven't been able to cope at all
   Yes, sometimes I haven't been coping as well as usual
   No, most of the time I have coped quite well
   No, I have been coping as well as ever

7. I have been so unhappy that I have had difficulty sleeping.
   Yes, most of the time
   Yes, sometimes
   Not very often
   No, not at all

8. I have felt sad or miserable.
   Yes, most of the time
   Yes, quite often
   Not very often
   No, not at all

9. I have been so unhappy that I have been crying.
   Yes, most of the time
   Yes, quite often
   Only occasionally
   No, not at all

10. The thought of harming myself has occurred to me.
    Yes, quite often
    Sometimes
    Hardly ever
    Never
This questionnaire consists of 21 groups of statements. Please read each group of statements carefully, and pick out the one statement in each group that best describes the way you have been feeling during the past two weeks, including today. Circle the number beside the statement you have picked. If several statements in the group apply equally well, circle the highest number for that group. Be sure that you do not choose more than one number for any group, including Item 16 (Changes in Sleeping Pattern) or Item 18 (Changes in Appetite).

**Sadness**
- I do not feel sad.
- I feel sad much of the time.
- I am sad all the time.
- I am so sad or unhappy that I can’t stand it.

**Pessimism**
- I am not discouraged about my future.
- I feel more discouraged about my future than I used to be.
- I do not expect things to work out for me.
- I feel my future is hopeless and will only get worse.

**Past Failure**
- I do not feel like a failure.
- I have failed more than I should have.
- As I look back, I see a lot of failures.
- I feel I am a total failure as a person.

**Loss of Pleasure**
- I get as much pleasure as I ever did from the things I enjoy.
- I don’t enjoy things as much as I used to.
- I get very little pleasure from the things I used to enjoy.
- I can’t get any pleasure from the things I used to enjoy.

**Guilty Feelings**
- I don’t feel particularly guilty.
- I feel guilty over many things I have done or should have done.
- I feel quite guilty most of the time.
- I feel guilty all of the time.

**Punishment Feelings**
- I don’t feel I am being punished.
- I feel I may be punished.
- I expect to be punished.
- I feel I am being punished.

**Self-Dislike**
- I feel the same about myself as ever.
- I have lost confidence in myself.
- I am disappointed in myself.
- I dislike myself.

**Self-Criticalness**
- I don’t criticize or blame myself more than usual.
- I am more critical of myself than I used to be.
- I criticize myself for all of my faults.
- I blame myself for everything bad that happens.

**Suicidal Thoughts or Wishes**
- I don’t have any thoughts of killing myself.
- I have thoughts of killing myself, but I would not carry them out.
- I would like to kill myself.
- I would kill myself if I had the chance.

**Crying**
- I don’t cry anymore than I used to.
- I cry more than I used to.
- I cry over every little thing.
- I feel like crying, but I can’t.
DATE

List of common symptoms of anxiety. Please carefully read each item in the list. Indicate how much you have been bothered by each item during the PAST WEEK, INCLUDING TODAY, by placing an X in the corresponding space in the column next to each symptom.

<table>
<thead>
<tr>
<th>Symptom</th>
<th>NOT AT ALL</th>
<th>MILDLY</th>
<th>MODERATELY</th>
<th>SEVERELY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Numbness or tingling</td>
<td></td>
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<td></td>
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<tr>
<td>Feeling hot</td>
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<tr>
<td>Dizziness</td>
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<tr>
<td>走bliness in legs</td>
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<tr>
<td>Unable to relax</td>
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<tr>
<td>Fear of the worst happening</td>
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<tr>
<td>Buzzing or lightheaded</td>
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<tr>
<td>Heart pounding or racing</td>
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<tr>
<td>Unsteady</td>
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<tr>
<td>Terrified</td>
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<tr>
<td>Nervous</td>
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<tr>
<td>Feelings of choking</td>
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<tr>
<td>Hands trembling</td>
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<tr>
<td>Haky</td>
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<tr>
<td>Fear of losing control</td>
<td></td>
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<tr>
<td>Difficulty breathing</td>
<td></td>
<td></td>
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<tr>
<td>Fear of dying</td>
<td></td>
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<tr>
<td>Scared</td>
<td></td>
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<tr>
<td>Indigestion or discomfort in abdomen</td>
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<tr>
<td>Faint</td>
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<tr>
<td>Face flushed</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sweating (not due to heat)</td>
<td></td>
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</tr>
<tr>
<td>A = Strongly Agree</td>
<td>A = Agree</td>
<td>NS = Not Sure</td>
<td>D = Disagree</td>
<td>SD = Strongly Disagree</td>
</tr>
<tr>
<td>-------------------</td>
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<td>----------------------</td>
</tr>
<tr>
<td>&quot;often have the feeling that I cannot handle things very well.&quot;</td>
<td>SA A NS D SD</td>
<td>&quot;find myself giving up more of my life to meet my children's needs than I ever expected.&quot;</td>
<td>SA A NS D SD</td>
<td>&quot;feel trapped by my responsibilities as a parent.&quot;</td>
</tr>
<tr>
<td>&quot;nce having this child, I have been unable to do new and different things.&quot;</td>
<td>SA A NS D SD</td>
<td>&quot;nce having a child, I feel that I am almost never able to do things that I like to do.&quot;</td>
<td>SA A NS D SD</td>
<td>&quot;im unhappy with the last purchase of clothing I made for myself.&quot;</td>
</tr>
<tr>
<td>&quot;ere are quite a few things that bother me about my life.&quot;</td>
<td>SA A NS D SD</td>
<td>&quot;aving a child has caused more problems than I expected in my relationship with my spouse (male/female friend).&quot;</td>
<td>SA A NS D SD</td>
<td>&quot;el alone and without friends.&quot;</td>
</tr>
<tr>
<td>&quot;hen I go to a party, I usually expect not to enjoy myself.&quot;</td>
<td>SA A NS D SD</td>
<td>&quot;m not as interested in people as I used to be.&quot;</td>
<td>SA A NS D SD</td>
<td>&quot;on't enjoy things as I used to.&quot;</td>
</tr>
<tr>
<td>&quot;y child rarely does things for me that make me feel good.&quot;</td>
<td>SA A NS D SD</td>
<td>&quot;ost times I feel that my child does not like me and does not want to be close to me.&quot;</td>
<td>SA A NS D SD</td>
<td>&quot;y child smiles at me much less than I expected.&quot;</td>
</tr>
<tr>
<td>&quot;hen I do things for my child, I get the feeling that my efforts are not appreciated very much.&quot;</td>
<td>SA A NS D SD</td>
<td>&quot;hen playing, my child doesn't often giggle or laugh.&quot;</td>
<td>SA A NS D SD</td>
<td>&quot;y child doesn't seem to learn as quickly as most children.&quot;</td>
</tr>
<tr>
<td>&quot;y child doesn't seem to smile as much as most children.&quot;</td>
<td>SA A NS D SD</td>
<td>&quot;y child is not able to do as much as I expected.&quot;</td>
<td>SA A NS D SD</td>
<td>&quot;akes a long time and it is very hard for my child to get used to new things.&quot;</td>
</tr>
</tbody>
</table>

Next statement, choose your response from the choices "1" to "5" below.

feel that I am: 1. not very good at being a parent 2. a person who has some trouble being a parent 3. an average parent 4. a better than average parent 5. a very good parent

Expected to have closer and warmer feelings for my child than I do and this bothers me. Sometimes my child does things that bother me just to be mean.

\[ y \text{ child seems to cry or fuss more often than most children.} \]
\[ y \text{ child generally wakes up in a bad mood.} \]
\[ feel that my child is very moody and easily upset. \]
\[ y \text{ child does a few things which bother me a great deal.} \]
\[ y \text{ child reacts very strongly when something happens that my child doesn't like.} \]
\[ y \text{ child gets upset easily over the smallest thing.} \]
\[ y \text{ child's sleeping or eating schedule was much harder to establish than I expected.} \]

Next statement, choose your response from the choices "1" to "5" below.

\[ have found that getting my child to do something or stop doing something is: \]
\[ 1. much harder than I expected \]
\[ 2. somewhat harder than I expected \]
\[ 3. about as hard as I expected \]
\[ 4. somewhat easier than I expected \]
\[ 5. much easier than I expected \]

Next statement, choose your response from the choices "10+" to "1-3."

\[ think carefully and count the number of things which your child does that bother you. \]
\[ or example: dawdles, refuses to listen, overactive, cries, interrupts, fights, whines, etc. \]
\[ here are some things my child does that really bother me a lot. \]
\[ y \text{ child turned out to be more of a problem than I had expected.} \]
\[ y \text{ child makes more demands on me than most children.} \]
APPENDIX 8

DAS by Graham B. Spanier, Ph.D.

<table>
<thead>
<tr>
<th>Items</th>
<th>Always Agree</th>
<th>Almost Agree</th>
<th>Occasionally Disagree</th>
<th>Frequent Disagree</th>
<th>Almost Disagree</th>
<th>Always Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Handling family finances</td>
<td></td>
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<tr>
<td>Matters of recreation</td>
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<tr>
<td>Religious matters</td>
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<tr>
<td>Demonstrations of affection</td>
<td></td>
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<tr>
<td>Friends</td>
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<tr>
<td>Sex relations</td>
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<tr>
<td>Conventionalcy (correct or proper behavior)</td>
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<tr>
<td>Philosophy of life</td>
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<tr>
<td>Ways of dealing with parents or in-laws</td>
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<tr>
<td>Aims, goals, and things believed important</td>
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<tr>
<td>Amount of time spent together</td>
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<tr>
<td>Making major decisions</td>
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<td>Household tasks</td>
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<td>Leisure time interests and activities</td>
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<tr>
<td>Career decisions</td>
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<td>How often do you discuss or have you considered</td>
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<tr>
<td>divorce, separation, or termination of your relationship?</td>
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<td>How often do you or your mate leave the house after a fight?</td>
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<td>In general, how often do you think that things</td>
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<td>between you and your partner are going well?</td>
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<tr>
<td>Do you confide in your mate?</td>
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<tr>
<td>Do you ever regret that you married (or lived together)?</td>
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<tr>
<td>How often do you and your partner quarrel?</td>
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<tr>
<td>How often do you and your mate get on each others' nerves?</td>
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<tr>
<td>Do you kiss your mate?</td>
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<tr>
<td>Do you and your mate engage in outside interests together?</td>
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<tr>
<td>How often do the following occur between you and your mate?</td>
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<tr>
<td>Have a stimulating exchange of ideas</td>
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<tr>
<td>Laugh together</td>
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<tr>
<td>Calmly discuss something</td>
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<tr>
<td>Work together on a project</td>
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<tr>
<td>These are some things about which couples sometimes agree or disagree</td>
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<tr>
<td>indicate if either item caused differences of opinions or were</td>
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<td>problems in the past few weeks</td>
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<tr>
<td>Being too tired for sex</td>
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<tr>
<td>Not showing love</td>
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<tr>
<td>The stars on the following line represent different degrees of</td>
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<tr>
<td>happiness in your relationship. The middle point, &quot;happy,&quot; represents</td>
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<td>the degree of happiness of most relationships. Circle the star above</td>
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<td>the phrase which best describes the degree of happiness, all things</td>
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<td>considered, of your relationship.</td>
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<tr>
<td>Extremely Unhappy, Fairly Unhappy, A Little Happy, Happy, Very</td>
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<tr>
<td>Happy, Extremely Happy</td>
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<td>perfect</td>
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<tr>
<td>2. Which of the following statements best describes how you feel</td>
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<td>about the future of your relationship? Circle the letter for each</td>
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<tr>
<td>statement.</td>
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<tr>
<td>A. I want desperately for my relationship to succeed, and would go</td>
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<td>to almost any length to see that it does</td>
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<tr>
<td>B. I want very much for my relationship to succeed, and will do all</td>
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<td>I can to see that it does</td>
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<tr>
<td>C. I want very much for my relationship to succeed, and will do my</td>
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<td>fair share to see that it does</td>
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<tr>
<td>D. It would be nice if my relationship succeeded, but I can't do</td>
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<tr>
<td>much more than I am doing now to keep the relationship going</td>
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<tr>
<td>E. It would be nice if it succeeded, but I refuse to do any more</td>
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<tr>
<td>than I am doing now to keep the relationship going</td>
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<tr>
<td>F. My relationship can never succeed, and there is no more that I can</td>
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<tr>
<td>do to keep the relationship going</td>
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</tbody>
</table>

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USA or Canada (416) 424-1700, (416) 424-1736 (fax) In Canada. 85 Oversea Boulevard, Suite 210, Toronto, Ontario M4H 1P1, (800) 268-6011

316
Directions
We first want you to list all of the people and groups with which you are closest at this time in your life, and who provide some support to you. You may list these people by giving initials or any way that allows you to remember them while you complete this questionnaire. The people may be family, friends, neighbors, co-workers, teachers, doctors, or anyone with whom you feel close or who are important to you.

Start by listing the single person you are "closest to," the one you feel the most comfortable sharing you most secret thoughts, ambitions, or problems. Then list the other people with whom you feel closest. You may also list any group of people or organization with which you are associated and have received support of any kind. This category could include groups such as "relatives," "neighbors," "co-workers," or specific places or organizations such as a clinic, a church or synagogue, the PTA, the AA, etc.

1__________________  11__________________
2__________________  12__________________
3__________________  13__________________
4__________________  14__________________
5__________________  15__________________
6__________________  16__________________
7__________________  17__________________
8__________________  18__________________
9__________________  19__________________
10__________________  20__________________
In the boxes below, take the first four people and the most important group on your list and write their initials in the corresponding column (A through E). If you do not have a group, use the fifth column for your fifth person. Now answer the following questions about the people and groups on your list. For the space labeled Relationship, please choose of the number codes listed below to indicate each person’s relationship to you.

<table>
<thead>
<tr>
<th>Relationship Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 = parent</td>
</tr>
<tr>
<td>2 = brother/sister</td>
</tr>
<tr>
<td>3 = son/daughter</td>
</tr>
<tr>
<td>4 = spouse/lover</td>
</tr>
<tr>
<td>5 = other family member</td>
</tr>
<tr>
<td>6 = coworker</td>
</tr>
<tr>
<td>7 = friend</td>
</tr>
<tr>
<td>8 = person(s) assoc. with community centers, hospitals, church, etc.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Relationship Code</th>
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<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
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</thead>
</table>

<table>
<thead>
<tr>
<th>B-D For Individuals Only</th>
</tr>
</thead>
<tbody>
<tr>
<td>B. How old is this person?</td>
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<tr>
<td>(if not sure, give an estimate)</td>
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<tr>
<td>C. How many years have you known this person?</td>
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<tr>
<td>(less than 6 months = 0)</td>
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<tr>
<td>D. What is the sex of this person?</td>
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<tr>
<td>(Male or Female)</td>
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<thead>
<tr>
<th>E-F For Groups Only</th>
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<tbody>
<tr>
<td>E. How many years have you been associated with this group?</td>
</tr>
<tr>
<td>F. How would you describe this group?</td>
</tr>
<tr>
<td>1. Recreational</td>
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<tr>
<td>2. Religious</td>
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<tr>
<td>3. Neighborhood or political organiz.</td>
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<tr>
<td>4. Therapeutic/medical</td>
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<tr>
<td>5. Professional/union or work-related</td>
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<tr>
<td>6. Other</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>G-Q For individuals &amp; groups</th>
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<tbody>
<tr>
<td>A</td>
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</tbody>
</table>

<p>| G. How often do you actually have contact with this person or group? |
| (face-to-face, phone, or letter) |
| 1. Once per year |
| 2. About 2-4 times per year |
| 3. About once per month or less |
| 4. About once a week |
| 5. Usually daily |</p>
<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
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</thead>
<tbody>
<tr>
<td>H. If you need or wish to see this person or group for help, how available is he/she/it?</td>
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<tr>
<td>1. Rarely avail.</td>
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<td>2. Sometimes avail.</td>
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<tr>
<td>3. Often avail.</td>
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<td></td>
<td>whenever needed</td>
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<tr>
<td>I. What types of things do you feel comfortable discussing with this person?</td>
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<tr>
<td>1. Feel uncomfortable</td>
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<tr>
<td>2. Only about others or local events</td>
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<tr>
<td>3. General life issues (job/health)</td>
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<td></td>
<td>in any discussion</td>
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<tr>
<td></td>
<td>very personal issues</td>
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<td></td>
<td>4. Most things, but not</td>
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<td></td>
<td>5. Anything, including very personal issues</td>
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<tr>
<td>For questions J-O, rate each person on a scale of 1 to 5:</td>
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<tr>
<td>J. To what extent does this person/group provide you with practical help (or the extent to which they would if the need arose) by doing such things for you as baby-sitting, household tasks, job referrals, tutoring, or loaning you money?</td>
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<tr>
<td>K. To what extent do you provide practical help to this person/group?</td>
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<tr>
<td>L. To what extent does this person/group provide you with emotional support by listening, talking, consoling, or just being with you?</td>
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<tr>
<td>M. To what extent do you provide emotional support to this person/group?</td>
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<tr>
<td>N. All people have occasional doubts about their own worth, or lose faith in themselves. To what extent does (or would) this person/group assure you of your own value when (or if) you felt worthless?</td>
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<tr>
<td>O. At times, people also need help in clarifying their direction or goals in life. Please indicate the extent to which each person or group has helped you when you need direction (or would if the need arose).</td>
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</table>
**P-Q** Refer to the most important personal loss or life event or ongoing difficulty you have experienced in the last year. (Examples: death or illness of friend or family member, marital problems, moving, financial problems, etc.)

<table>
<thead>
<tr>
<th>DESCRIBE THE EVENT</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
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</thead>
<tbody>
<tr>
<td><strong>P.</strong> Did you contact this person or group to talk about this event? <strong>1= yes 0= no</strong></td>
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<td>Q. How did you feel as a result of talking to this person or group?</td>
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<tr>
<td>0. I did not talk to this person/group</td>
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<tr>
<td>1. The &quot;support&quot; seemed unhelpful</td>
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<td>2. I did not really feel supported</td>
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<td>3. I felt somewhat supported</td>
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<td>4. I felt fairly supported and more able to cope</td>
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<tr>
<td>5. I felt very supported</td>
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</table>
Peel PND Programme Initial Assessment

Date:

Referring Person:__________________________________________________________

Client:__________________________________________________________ Age: __________

Presentation: Age of infant: ______________________________

Mood: Elevated __________ Normal __________ Depressed __________

Speech: Fast __________ Normal __________ Slow __________

Eye Contact: Good __________ Fair __________ Poor __________

Movement: Agitated __________ Normal __________ Slow __________

Comments:______________________________________________________________________

Recent PND Background: How long:______________________________________________

Symptoms: Conflict in interpersonal relationships __________ Excessive feelings of guilt __________

mood swings __________ consistent depression __________ irritable __________

anger with baby __________ poor concentration __________ anxiety __________

panic attacks __________ OCD symptoms __________ no energy __________

self harm/suicide __________ poor/excessive appetite __________ sleep problems __________

wanting to run away __________ Loss of interest/pleasure in usual activities __________

Anger with others __________ Difficulty completing usual tasks __________

Lowered libido __________

Other:

How long have these symptoms been present? __________

Have these symptoms been present continuously? __________
Pregnancy:

Planned pregnancy: ☐ Yes ☐ No
Partner’s response: ☐ Positive ☐ Negative
Normal range of experiences: ☐ Yes ☐ No

Complications:________________________

Mother’s health:

Good Fair Poor

Emotional/Mental state:

Good Fair Poor

Comments:________________________________________

Birth:

Where:________________________________________

Length of Birth: ☐ Hours
Any complications: ☐ Yes ☐ No
Time in Hospital: ☐ Days
Partner/Family present: ☐ Yes ☐ No

Emotional/Mental reaction:

Positive Neutral Negative

First thoughts on seeing baby:

Positive Neutral Negative

Bonding with baby:

Positive Neutral Negative

Mother’s physical health after birth:

Good Fair Poor

Baby’s physical health after birth: Good Fair Poor

Breast feeding experience:

Good Fair Poor

Comments:________________________________________

Previous pregnancies/Birth/Postpartum Period:________________________________________

Including terminations/miscarriages:________________________________________
Parenting at home:

Bonding well with baby/toddler: Yes No Unsure

Coping with baby's demands: Yes No Unsure

Baby's/toddler's health: Good Fair Poor

Husband/partner's support role: Good Fair Poor

Family or friends support: Good Fair Poor

Other siblings' reaction to your depression/to a new baby:

Good Fair Poor

Childhood/Family History:

Genogram (including where family members live:

Family interaction as a child - Father, Mother, Siblings:

Good Fair Poor

Family interaction as a teenager - Father, Mother, Siblings:

Good Fair Poor

Relationship with family members now:

Good Fair Poor
Comments:

Any experience of depression or anxiety as a child/teen: □ Yes □ No

Any history of depression in the family: □ Yes □ No

Social contacts as a child/teen: Good □ Fair □ Poor □

Current Marriage/Defacto Relationship:

Family details: ________________________________

Husband/Partner: Known for _______ years. Met in _______. Married (Year): _______.

Have lived in: __________________________________________

Relationship is described as: Good □ Fair □ Poor □

Partner is generally supportive: □ Yes □ No

Communication is: Good □ Fair □ Poor □

Does partner understand PND symptoms: Yes □ No □ Unsure □

Any strong negative factors in relationship eg, alcohol, domestic violence: □ Yes □ No

Employment: Client: __________________________ Husband/Partner: ______________________

Extra comments: ________________________________________________________________

Husband/Partner's family live in: _________________________________________________

Relationship with Husband/Partner's family: Good □ Fair □ Poor □

Husband/Partner's relationship with his family: Good □ Fair □ Poor □

Husband/Partner's relationship with client's family: Good □ Fair □ Poor □
Social Contacts:

Close friends: □ Yes □ No
Acquaintances: □ Yes □ No
Do significant friends live locally: □ Yes □ No
Do you belong to social groups: □ Yes □ No

Details:

Husband/Partner's response to above question: ____________________________________________________________

Personality:

General adult characteristics:
□ shy □ outgoing □ confident □ angry □ happy
□ moody □ depressed □ negative □ anxious □ positive

Stress levels: High Low

Self Esteem: High Low

Body Image: Good Fair Poor

Any significant differences as a child/teenager:
Yes No Unsure

Comments:

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
Health:

Current general physical health:  
-

Any medical conditions past/present: 
-

Any treatment (past, present) for depression and/or anxiety as an adult:  
-

Any current medication for depression:  
-

General Practitioner:__________________________

Summary:

EPDS:___________

Provisional Diagnosis:__________________________

Plan:

Comments:

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

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_________________________________________________________________________
A. Five or more of the following symptoms have been present during the same minimum two week period and represent a change from previous (i.e. normal) functioning; at least one of the symptoms must be (1) depression of mood or (2) loss of interest or pleasure or motivation and drive.

NB: Do not include symptoms that are clearly due to a general medical condition or mood -incongruent delusions or hallucinations.

1) Depressed mood most of the day, nearly every day, as indicated by either subjective report (e.g. feels sad or empty) or observation made by others (e.g. appears tearful).
2) Markedly diminished interest or pleasure in all, or almost all, activities most of the day, nearly every day (as indicated by either subjective account or observation made by others).
3) Significant weight loss when not dieting or weight gain (e.g. change in more than 5%of body weight a month), or decrease or increase in appetite nearly every day.
4) Insomnia or hypersomnia nearly every day.
5) Psychomotor agitation or retardation nearly every day (observable by others, not merely subjective feelings of restlessness or being slowed down).
6) Fatigue or loss of energy nearly every day
7) Feeling of worthlessness or excessive or inappropriate guilt (which may be delusional) nearly every day (not merely self reproach or guilt about being sick).
8) Diminished ability to think or concentrate, or indecisiveness, nearly every day (either by subjective account or as observed by others).
9) Recurrent thoughts of death (not just fear of dying), recurrent suicidal ideation without a specific plan, or a suicide attempt or a specific plan for committing suicide.

A. These symptoms do not meet criteria for mixed episode
B. The symptoms cause clinically significant distress or impairment in social, occupational or other important areas of functioning
C. The symptoms are not due to the direct physiological effects of a substance (e.g. a drug abuse, a medication) or a general medical condition (e.g. hypothyroidism).
D. The symptoms are better accounted for by bereavement i.e. after the loss of a love one, the symptoms persist for longer than 2 months or are characterized by functional impairment, morbid preoccupation with worthlessness, suicidal ideation, psychotic symptoms or psychomotor retardation.

American Psychiatric Association, 1994
The essential feature of **Major Depressive Disorder** is a clinical course characterized by one of more Major Depressive Episodes as outlined previously, without a history of Manic Mixed or Hypomanic Episodes (American Psychiatric Association, 1994). As indicated, episodes of mood disorders due to substances or a medical condition do not count towards this diagnosis. In addition, the episodes must not be better accounted for by Schizoaffective Disorder or superimposed by Schizophrenia, Schizophreniform Disorder, Delusional Disorder or Psychotic Disorder (American Psychiatric Association, 1994).

A number of specifiers may be used to describe a current Major Depressive Episode. These specifiers include: Mild, Moderate, Severe with Psychotic Features and Severe without Psychotic Features, In Partial Remission and In Full Remission (American Psychiatric Association, 1994).

Depression severity for a non psychotic depressive episode, may be judged as Mild, Moderate or Severe, based on three factors: the number of criteria symptoms, the severity of the symptoms and the degree of functional ability or distress (American Psychiatric Association, 1994) For example, Mild Episodes are characterized by the presence of only five or six depressive symptoms and either a mild disability or capacity to function normally but with substantial and increased effort (American Psychiatric Association, 1994). Alternatively, episodes diagnosed as Severe Without Psychotic Episodes are characterized by the presence of most of the criteria's symptoms together with clear cut, observable disability, such as inability to work or care for children. Moderate Episodes have a severity that is intermediate between mild and severe (American Psychiatric Association, 1994).

In addition, Major Depressive Disorder can also be specified according to specific features, for example, Chronic with Catatonic features, with Melancholic Features and with Postpartum Onset (American Psychiatric Association, 1994). This latter specifier, with Postpartum Onset, can be applied to the current (or most recent) Major Depressive Episode if onset if within 4 weeks after the delivery of the child (American Psychiatric Association, 1994).

Alternatively, if depressive symptoms for Major Depressive Episode are not met, depressive symptomatology may be diagnosed in connection with an alternative set of criteria: Adjustment Disorders. The essential feature of an Adjustment Disorder is the development of clinically significant emotional or behavioural symptoms in response to an identifiable psychosocial stressor or stressors (American Psychiatric Association, 1994). The category Adjustment Disorder with Depressed Mood would not be used if the disorder meets the criteria for another specific disorder, such as Major Depressive Episode. By definition, the symptoms of an Adjustment Disorder must develop within three months after the onset of the stressor(s) and must resolve within six months of its termination, however, symptoms may be prolonged if the stressors are chronic or have enduring consequences (American Psychiatric Association, 1994). The DSM-IV system
has subtypes and specifiers for Adjustment Disorders, such as With Depressed Mood, With Anxiety, and With Mixed Anxiety and Depressed Mood

**ICD-10 Criteria for Depressive Episodes:**

*(World Health Organization, 1992)*

**DCR-10 F32 Core symptoms for Depressive Episodes:**

G1. The depressive episode should last for at least 2 weeks
G2. There have been no hypomanic or manic symptoms to meet the criteria for hypomanic or manic episode (F30) at any time in the individuals' life
G3. Most commonly used exclusion clause. The episode is not attributable to psychoactive substance use or any other organic mental disorder

**Mild Depressive Episode F32.0:**

a. The general criteria for depressive episode (F32) must be met
b. At least two of the following three symptoms must be present:
   1. Depressed mood to a degree that is abnormal for the individual, present for most of the day and almost every day, largely uninfluenced by circumstances and sustained for at least 2 weeks.
   2. Loss of interest of pleasure in activities that are normally pleasurable
   3. Decreased energy or increased fatigability.
c. An additional symptom or symptoms from the following list should be present, to give a total of at least 4.
   1. (loss of confidence or self esteem
   2. unreasonable feelings of self reproach or excessive and inappropriate guilt
   3. recurrent thoughts of death and suicide, or any suicidal behaviour
   4. complaints or evidence of diminished ability to think or concentrate, such as indecisiveness or vacillation
   5. change in psychomotor activity with agitation or retardation
   6. sleep disturbance of any type
   7. change in appetite (decrease or increase) with corresponding weight change

**Moderate Depressive Episode F32.1:**

DCR -10
a. The general criteria for depressive episode must be met (F32)
b. At least two of the three symptoms listed for F32.0, criterion B, must be present
c. Additional symptoms from F32.0, criterion C, must be present to give a total of 6.
Severe Depressive Episode without Psychotic symptoms F32.2:

DCR -10
a. The general criteria for depressive episode must be met (F32)
b. At least two of the three symptoms listed for F32 0, criterion B, must be
   present
c. Additional symptoms from F32.0, criterion C, must be present to give a total
   of 8.
d. There must be no hallucinations, delusions or depressive stupor.

Mental and Behavioral Disorders associated with the Puerperium, not
elsewhere classified F53:

This category includes only mental disorders associated with the puerperium
(commencing within 6 weeks of delivery) that do not meet the criteria for
disorders elsewhere. The inclusion of this category is in recognition of the
practical problems that make gathering of details about puerperal illness virtually
impossible. The subdivision is useful for the estimation of workload and for
decisions about service delivery.

F53.0 Mild mental and behavioural disorders associated with the puerperium, not
elsewhere classified

F53.1 Severe mental and behavioral disorder associated with the puerperium,
not elsewhere classified.
Mandurah 6210

Dear

Thankyou for agreeing to participate in the Peel PND programme. I am pleased to announce that we starting the group programme next week, the details are as follows.

Men's group: Tuesday evening 6-8 pm. This will run for 6 consecutive weeks
Women's group: Wednesday 12.30 p.m. -2.30 pm. This will run for 10 consecutive weeks

The men's group will be co-facilitated by Anthony Collier and the women's group by Veronica Yeo.

Both groups will be held at the Peel Health Campus, Lakes Rd, Mandurah. We are located in the first building on your left as you drive in the carpark. The building is marked “Community Health”.

Please bring the survey papers you have filled out with you, as these are very important for us to be able to determine how effective the programme is for you.

Kind regards,

Sarah Davey
Project Coordinator
29/03/00
MEDICATION
AND POSTNATAL DEPRESSION

If antidepressants are recommended to you, they should be seen as a way of getting you “over the hump” of the depression. Most women are anxious about introducing drugs of any kind into their bodies during pregnancy and while they are breastfeeding. A further fear is that the medication will be sedating, making it even more difficult to stay on top of their jobs and in touch with the baby. It is important to consider that the baby needs you to be well, and to make sure any decisions you make will be informed ones. This pamphlet provides some very basic information about antidepressants - if you would like more detail, please ask your doctor.

Commonly Used Antidepressants

<table>
<thead>
<tr>
<th>Brand Name</th>
<th>Generic Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prothiaden</td>
<td>Dothiepin</td>
</tr>
</tbody>
</table>
| Tryptanol  | Amitriptyline| \[
| Tofranil   | Imipramine   |
| Anafranil  | Clomipramine |

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Prozac</td>
<td>Fluoxetine</td>
</tr>
<tr>
<td>Zoloft</td>
<td>Sertraline</td>
</tr>
<tr>
<td>Aropax</td>
<td>Paroxetine</td>
</tr>
<tr>
<td>Aurorix</td>
<td>Moclobemide</td>
</tr>
</tbody>
</table>

Tricyclic antidepressants

SSRI’s

MAO Inhibitor

How They Work:
All of these drugs work in one way or another to increase the amount of the neurotransmitters (brain chemicals), particularly Serotonin, within the fluid bathing the brain cells. It usually takes 2-3 weeks to reach effective blood concentrations of these drugs, and 4-6 weeks to know whether or not they will be helpful. After a while, the body resumes its own capacity to provide adequate Serotonin levels, and the drug will not be needed, but in most women this will take several months, or even up to a year or more.

Side Effects:

Tricyclics
These drugs are sedating, which may be a benefit if lack of sleep is a major problem for you. For this reason they are usually taken at night. A dry mouth and blurred vision may occur, and some women become constipated. Simple strategies should
DEPRESSION AND CHILDBIRTH

Depression after childbirth can take three main forms:

Postnatal blues (baby blues)
Postnatal depression (PND)
Postpartum (postnatal) psychosis.

Postnatal blues is a period of tearfulness, low spirits and often a sense of overwhelming helplessness which occurs in 70-80% of women around the 3rd-5th days postpartum. It is thought to be caused by sudden hormonal changes and passes away without treatment within about 24 hours. The postnatal blues occur so commonly as to be regarded as normal.

Postpartum psychosis affects approximately one in a thousand women who have recently given birth, usually arising within three weeks of delivery. This very serious condition puts both mother and child at considerable risk. It may be caused in part by rapidly changing hormonal levels and usual symptoms include:

- delusions and hallucinations
- confusion (which may change from hour to hour)
- sleep and appetite disturbance
- feelings of depression and/or elation
- marked indecisiveness (especially with regard to caring for the baby)
- loss of pleasure and interest in usual activities
- feelings of guilt.

Women with this level of mental disturbance soon after having a baby require urgent psychiatric assistance. Hospital admission may be needed, preferably at an institution that can care for both the mother and baby together. With proper treatment, the outlook is good, with a return to normal functioning within a few months.

There were almost 25,000 births in Western Australia in 1997. Postnatal depression occurs in around 20% of women. This means in that year alone, 5,000 women in Western Australia were at risk of developing postnatal depression. Additionally, the incidence of PND may be greater in rural areas due to such factors as isolation, traditional roles & expectations and diminished access to support services.

Postnatal depression has its onset within 3-12 months following childbirth. The symptoms of postnatal depression are the same as those experienced in any serious depressive episode, and include:

- Anxious and/or depressed mood
- Exhaustion and loss of energy
Being a Parent

Parent Easy Guide #1

Becoming a parent does not come with an instruction manual for all the things you will face. It is one of the most important and difficult things you can do as well as one of the most rewarding. To raise a child is an enormous responsibility which is usually taken for granted and for which there is little training. Most parents learn as they go, influenced by the way they were brought up or by what they have read and watched others do. Parenting styles may be different but we all share a common goal. We want our children to turn into healthy, happy, well adjusted, successful, honest, caring, responsible adults who will be respectful of others' feelings and property, be able to get along with others and be able to cope with difficulties! It is a lot to ask. Your children and your community rely on you to do this well.

Your feelings

One of the most important things in parenting is your own attitude to it. Do you like it, do you feel scared about it or are you thoroughly enjoying it?

As a parent you will experience a range of emotions which are all normal and yet which can make you feel like you are on a roller coaster ride. You will feel love, joy and pride but also more frightening emotions which can be very strong, such as anger, panic and hatred. Often parents feel that they are not appreciated by their children or valued by others. Such emotions can leave you feeling guilty as well as thinking you are not a good parent. It is important to remember you’re not expected to be perfect and that all parents feel that they have made mistakes at some stage. Most parents at some time feel tired and upset and question what it is all about.

Things that might make it easier

Find out what you don’t know

- Be aware of how children grow and develop
- Be wise enough to know that you can do things differently.
- Be strong enough to say you don’t know how to...
- Be big enough to ask for information or advice

Value yourself

You are doing an important job. Be proud of the efforts you have put in through the day, no matter how small the tasks. When talking to friends about parenting, don’t moan and groan, talk of it as a special career.

Look after yourself

See yourself as a person first and as a parent second. Be careful not to expect too much of yourself and of others. Take notice of your own special talents. Praise yourself for simple things. Don’t dwell on your mistakes. Mistakes are for learning from, not for making you feel bad.

Accept your feelings

Understand that mixed feelings are normal. At times of stress or changes in your family you can be swamped with a range of emotions. At these times it is important to reach out and speak out... to you partner, to your friends, to family members or to someone not caught up in the emotion.

Reward yourself

Do at least one thing a day that makes you feel good. Get someone to fill in so that you can have ‘time out’ to do whatever you feel like doing even if its 30 minutes... have a bat, read a book, kick a football.

Talk to yourself

The way in which you talk to yourself matters. If you say ‘this child is trying to get at me’ or ‘why should I put up with this?’ you will react very differently than if you say to yourself ‘What’s happening to my child to make him behave like this?’

Trust yourself

Everyone has their own ideas about parenting and sometimes it’s easy to become confused or to feel inadequate. Listen to other people’s ideas (this is how we all learn) but do what feels right for you. Trust your own judgement.
POSTNATAL DEPRESSION
RISK FACTORS

No sole cause - rather a number of inter-relating factors, including:

- an inherited vulnerability to depression
- a personal or family history of postnatal depression or other depressive or psychiatric illness
- vulnerable personality style (eg. perfectionist, anxious or over-sensitive)
- pregnancy unwanted
- birth process did not fulfil expectations (eg. Unwanted intervention)
- obstetric and/or delivery complications such as birth by caesarean section
- previous pregnancy or birth-related crises (eg. Miscarriages, terminations, stillbirths, neonatal death, premature birth)
- handicapped or ill baby
- baby not of desired sex
- previous experience of SIDS or child death
- a recent bereavement (especially of someone significant)
- physiological stresses (eg. severe premenstrual syndrome, other hormonal and biochemical changes, fatigue, physical disability, drugs)
- relationship difficulties with partner, mother or father, (eg. partner separation or divorce, family conflict)
- history of childhood physical, emotional or sexual abuse
- poor social supports (eg. Social isolation - especially emigrant, non-English speaking or rural women; limited access to friends or family)
- stressful life events (eg. Illness in self or partner, poor housing, moving house, partner changing jobs, other significant life changes)
- financial difficulties (eg. Loss of income, unemployment, debts)

This is not an exclusive list and many other factors could also contribute to the onset of postnatal depression. Accordingly, the existence of these factors in one’s life does not necessarily mean that postnatal depression will occur. They are risk factors that are commonly seen in people who have experienced postnatal depression. Paying attention to these factors may help in dealing with an experience of postnatal depression.

Although identifying particular risk factors may help to give some understanding and so reduce their effect, it is generally more useful to focus on what strategies can be found to manage the present and move into the future, rather than remaining stuck in the past.
POSTNATAL DEPRESSION SYMPTOMS

1. Feeling sad, pessimistic and tearful - a very common symptom. "I keep crying and I don’t know why. I feel so tired."

2. A loss of ability despite previous competence. "Everything is getting on top of me and I just can’t cope; I feel unmotivated to do necessary things let alone extra activities".

3. Poor self-image. Feelings of worthlessness and inadequacy - feeling a failure. "I just feel so useless and hopeless - why can’t I manage when everyone else does?"

4. Inability to think clearly or find the right words. "I keep forgetting things, and I can’t concentrate on a book or a conversation".

5. Difficulties relating to others and/or fear of social contact. "I didn’t answer the door; I crossed to the other side of the road when I saw someone I knew coming towards me."

6. Overwhelming feelings of anxiety. Irritability. "I was so tense and felt so angry, I could have hit somebody."

7. Concern about sleep problems. "I’m exhausted, but it is so hard to get to sleep."
   "I can never seem to get a full nights sleep."

8. Poor appetite or overeating. "I only eat because I have to"; "I feel as though I am living in the fridge".

9. Loss of sexual interest. "I was definitely not interested in sex and I was so angry with my husband for not understanding."

10. Guilt - feeling that you are to blame. "I feel as though everything is my fault."

11. Physical problems - low levels of energy, apathy, lethargy and fatigue. "I couldn’t be bothered doing the dishes; I find it a real effort to do anything."

12. Suicidal thoughts or worry about harming the baby. "Sometimes I wish that I wouldn’t wake up in the morning; I am frightened that I might harm my baby when I get frustrated."

These are all feelings commonly experienced by people affected by postnatal depression, anxiety and stress, and are good cues to seek help and support from those around you. Do not ignore them!
Helping children build inner strength to cope with the ups and downs of growing up is one of the best things parents can do for them.

Over the years many researchers have looked at what helps some people to manage difficult times while others don’t cope so well. They have looked at some of the things that cause stress to children, and at the things that parents can do to help children build the strength to cope with stress. Often we cannot prevent things going wrong for children but we can try to help children build the strengths that will help them cope.

Some things that are stressful for children
Here are examples of some of the things that can be very stressful. There are others, of course, and you will know the things that affect your own children.

- Birth injury or being very small at birth
- If parents are ill
- Disability - be it their own, another child or a parent.
- Parents’ separation or divorce.
- A new baby being born when the child is very young (under two).
- If parents see a child as “difficult”.
- Too many changes in a child’s life eg schools, teachers, where they live and who cares for them.

What parents can do

- **Belonging** - one of the most important things that children need is a sense of belonging in the first year of life (and from then on). The first year is very important. Babies need to know that someone or some people really care and will always be there for them. These people can be mother and/or father, a grandparent or another reliable person who cares for them a lot. Becoming attached to another person besides the parent does not mean that children will be less attached to their parents. In fact it is the opposite. When children learn to belong in this way it gives them the ability to make attachments to other important people in their life. If parents are sick or not there for some reason, having someone else is very important for your child’s healthy development.
- **Comforters** - comforters such as dummies, blankets or special toys can help children to cope with stresses in the early years. They need them most at times of stress or separations from parents, such as bedtime or when they go to childcare. Usually they are ready to give them up by the time they are three or four, but not always. (If your child needs a comforter a lot of the time when he is at school there may be something else going on in his life that is worrying him.)
- **Self esteem** - children learn self esteem from birth, even before they know who they are. They learn it because someone is there for them and comes when they cry, comforts them when they are lonely and responds to their little noises. When a baby makes little noises and a parent copies and makes the noise back, it says to the baby that she has been heard and noticed. All this helps to develop her self esteem. In childhood and adolescence children need to know that they are loved because of the special people they are. They need to be told this often and to be shown by:
  - spending time with them
  - supporting their interests
  - the ways that you show you care.

*They need to feel they have a place in the family* - that they are missed if they are away and they have a part in what needs to be done eg family chores.

- **Self control** - children need to develop a sense of being able to manage things for themselves as they grow up. They can start learning this from babyhood. There are lots of ways that you can teach them this kind of confidence.
  - Attend to the needs of your baby and respond to the baby’s cries and little noises.
  - Smile and clap when your baby does something for himself.
  - Allow your one year old to try lots of new things and to say “no” (within reasonable limits).
  - Show delight in what your child is learning.
  - Help him to learn to do things for himself instead of always having the answers.
## HELPFUL RESOURCES

<table>
<thead>
<tr>
<th>Resources</th>
<th>Telephone</th>
<th>Services provided</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent Information Centre</td>
<td>95359185</td>
<td>Information on parenting practises, developmental issues, feeding, sleeping, and disciplining strategies. Books, videos and pamphlets</td>
</tr>
<tr>
<td>Health Matters</td>
<td>95861746</td>
<td>Information regarding general health issues and services available in this region</td>
</tr>
<tr>
<td>Ngala</td>
<td>93677855 or after hours 93673256</td>
<td>Assistance with adjustment to parenting, feeding and sleeping difficulties, sibling rivalry, constant crying Parent education, Family Residential Programme, Centre consultations</td>
</tr>
<tr>
<td>Peel Community Health</td>
<td>95318088</td>
<td>Postnatal care, current health issues, immunisation Parenting and family planning issues</td>
</tr>
<tr>
<td>Falcon Child Health</td>
<td>95345491</td>
<td>As above</td>
</tr>
<tr>
<td>Pinjarra Child Health</td>
<td>95311138</td>
<td>As above</td>
</tr>
<tr>
<td>Coodannup Child Health</td>
<td>95359806</td>
<td>As above</td>
</tr>
<tr>
<td>Waroona Child Health</td>
<td>97331517</td>
<td>As above</td>
</tr>
<tr>
<td>Redcross Family Support Service</td>
<td>9325111</td>
<td>Redcross volunteers to assist in home with child care duties such as feeding and bathing for families with PND, twins/triplets</td>
</tr>
<tr>
<td>Mandurah Men’s Group</td>
<td>95432803</td>
<td>Support and discussion group for men Issues discussed centre around relationships, health and work.</td>
</tr>
<tr>
<td>The Compassionate Friends</td>
<td>94868711</td>
<td>Support group which aims to understand grief of stillbirth, miscarriage and infant death</td>
</tr>
<tr>
<td>Centre Name</td>
<td>Physical Address</td>
<td>Contact No.</td>
</tr>
<tr>
<td>--------------------------------------------</td>
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<tr>
<td>Cosy Corner Child Care Centre</td>
<td>30 Hackett Street, Mandurah</td>
<td>95811044</td>
</tr>
<tr>
<td>Greenacres Child Care Centre</td>
<td>104 Tuckey Street, Mandurah</td>
<td>95356857</td>
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<tr>
<td>Jack and Jill Child Care Centre</td>
<td>4 Aldgate Street, Mandurah</td>
<td>95357395</td>
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<tr>
<td>Kids Cove Child Care Centre</td>
<td>17 Fraser Ent, Riverside Gardens</td>
<td>95349225</td>
</tr>
<tr>
<td>Meadow Springs Child Care Centre</td>
<td>180 Oakmont Ave, Meadow Springs</td>
<td>95816564</td>
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<tr>
<td>Pinjarra Child Care Centre</td>
<td>40 McLarty Road, Pinjarra</td>
<td>95312373</td>
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<tr>
<td>Small Friends Playschool</td>
<td>38 Thera Street, Falcon</td>
<td>95343996</td>
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<tr>
<td>Cuddles Child Care Centre - Falcon</td>
<td>31 Littleton Street, Falcon</td>
<td>95344064</td>
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<tr>
<td>Cuddles Child Care Centre - Halls Head</td>
<td>50 McLarty Road, Halls Head</td>
<td>95812903</td>
</tr>
<tr>
<td>Cuddles Honeysuckle Ramble Child Care Centre</td>
<td>35 Honeysuckle Street, Halls Head</td>
<td>95827040</td>
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### OUTSIDE SCHOOL HOURS

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<tr>
<th>Name</th>
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<th>Contact Number</th>
<th>Postal Address</th>
<th>Type of Care</th>
<th>Chair/With</th>
<th>Duties/Contact Number</th>
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<tr>
<td>Dwellingup After School Care</td>
<td>Dwellingup Nursing Post</td>
<td></td>
<td>Post Office Dwellingup WA 6213</td>
<td>After School Care M-F 3-6 pm 6-12 yo</td>
<td>Lisa Craig (Chair)</td>
<td>Donna Gibson</td>
</tr>
<tr>
<td>Kadadinny Kids Club</td>
<td>Lot 1 Wanneep Road Mandurah</td>
<td>95355908</td>
<td>PO Box 1009 Mandurah 6210</td>
<td>After School Care/Vacation Care M-F 3-6pm/9-6pm 6-12 yo</td>
<td>Contact: Raelene Storoch</td>
<td>Heather Fisher</td>
</tr>
<tr>
<td>Warraka Year Round Care</td>
<td>Community Church Centre, Old Coast Road, Falcon</td>
<td>95822002</td>
<td>Community Church Centre Lot 6 Old Coast Road, Falcon WA 6210</td>
<td>Out of School Care/Vacation Centre 6.45am - 9am 3pm - 6.30 pm 6.45am - 6.30pm</td>
<td>Gavin Woolhead</td>
<td>Gavin Woolhead</td>
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<tr>
<td>Adventure Zone</td>
<td>North Mandurah Primary School, Park Road, Mandurah</td>
<td>95371283 0416537127</td>
<td>PO Box 3035 Mandurah Forum WA 6210</td>
<td>Vacation Care 8.00am-6.00 pm 5-12 yo</td>
<td>Peter Dunning</td>
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### FAMILY DAY CARE - SCHEME

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<tr>
<th>Service Name</th>
<th>Physical Address</th>
<th>Contact Number</th>
<th>Postal Address</th>
<th>Type</th>
<th>Funding</th>
<th>Operating Hours</th>
<th>Chair</th>
<th>Coordinator</th>
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<tr>
<td>Peel Family Day Care</td>
<td>cnr Steerforth and Tankerton</td>
<td>95815843</td>
<td>PO Box 162 Mandurah WA</td>
<td>CB</td>
<td>Operational CA</td>
<td>various</td>
<td>Jacqueline Turell</td>
<td>Linda McGoWAn</td>
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## OCCASIONAL CARE

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<th>Name</th>
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<th>Contact Number</th>
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<th>Type of Care</th>
<th>Chairperson</th>
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<tbody>
<tr>
<td>Boddington Bear Occasional Care</td>
<td>13 Hakea Street Boddington</td>
<td>0898839112</td>
<td>13 Hakea Street Boddington 6390</td>
<td>Occ Care T-F 9am -3 pm 0-5 yo 9 place</td>
<td>Joanne Parker</td>
<td>Norma Jemmerson</td>
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<td>Waroona Rec Centre</td>
<td></td>
<td>17 Parnell Street Waroona WA 6215</td>
<td>M/W/F 8:30-1:30 Tues/Thurs 8:30-3:30 0-5 yo -10 places</td>
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<td>Self funded</td>
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## FAMILY CENTRE

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<tr>
<th>Name</th>
<th>Physical Address</th>
<th>Contact Number</th>
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<th>Administration</th>
<th>Age Group</th>
<th>Funding Source</th>
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<tr>
<td>Falcon Family Centre</td>
<td>58a Linville Street Falcon</td>
<td>95343010 (o)</td>
<td>PO Box 5159 Falcon WA 6210</td>
<td>Susie Perkins</td>
<td>95356688</td>
<td>August</td>
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<tr>
<td>Greenfields Family Centre</td>
<td>Murdoch Drive Greenfields</td>
<td>95357165 (o)</td>
<td>PO Box 3081 Mandurah East 6210</td>
<td>Kay Henderson</td>
<td>Sally Hortin</td>
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## TOY LIBRARIES

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<th>Library</th>
<th>Location</th>
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<tr>
<td>Murray Toy Library</td>
<td>behind Murray Districts Hospital, Pinjarra</td>
<td>Karen Golluchewski</td>
<td>9581 3624</td>
<td>Saturday</td>
<td>9:30 - 11:30am</td>
<td>$40 a year $25 for 6 months</td>
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<tr>
<td>Waroona Toy Library</td>
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<td>Donna Walsley</td>
<td>97331 558</td>
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<td>9:30 - 11:30am</td>
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## PLAYGROUPS

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<th>Name of Playgroup</th>
<th>Address</th>
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<td>Boddington Playgroup</td>
<td>Old Police Station Wuraming Ave Boddington</td>
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<td></td>
<td>PO Box 172 Boddington 6390</td>
<td>Tues/Thur 9.30 - 11.30 am</td>
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<tr>
<td>Coodanup Playgroup</td>
<td>Coodanup Hall Wanjeeb Road Coodanup</td>
<td>Karen Reddix</td>
<td>9535859</td>
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<td>Friday 9.30 - 11.30 am</td>
<td>$8 a term, $14 annual insurance</td>
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<td>Dwellingup Playgroup</td>
<td>GWA Hall Del Park Road Dwellingup</td>
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<td>C/- Post Office Dwellingup WA 6215</td>
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<tr>
<td>Falcon Playgroup</td>
<td>Falcon Family Centre 58a Liniola Street Falcon</td>
<td>Shari Gregory Lee Herring</td>
<td>95852696 95815536</td>
<td>PO Box 5205 Falcon WA 6210</td>
<td>Mon-Fri 9.00 - 11.15 am</td>
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<td>Greenfields Playgroup</td>
<td>Greenfields Family Centre, Murdoch Drive Greenfields</td>
<td>Janene Hare/Clare Hagan</td>
<td>95817410 95863738</td>
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<td>Mon - Fri 9.10 - 11.10 am</td>
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<td>Madora Playgroup</td>
<td>Ron Christian Hall Orsia Street Madora Bay</td>
<td>Robyn Wheatley</td>
<td>95372355</td>
<td>1 Challenger Road Madora WA 6211</td>
<td>Thursday 9.30 - 12 noon</td>
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<td>Mandurah Catholic Playgroup</td>
<td>Catholic Parish Centre Pinjarra Road Mandurah</td>
<td>Francine Raven</td>
<td>95861287</td>
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<td>Mandurah Playgroup</td>
<td>Library Road Mandurah 6210</td>
<td>Luann Patton</td>
<td>95359170 95827019</td>
<td>PO Box 651 Mandurah 6210</td>
<td>M-Fri 9.15-11.15am Wed 12.30-2.30 pm</td>
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<td>Murray Districts</td>
<td>Forrest Street Pinjarra</td>
<td>Natalie Goodlich</td>
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<td>Playgroup</td>
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<tr>
<td>Waroona Playgroup</td>
<td>Cnr Hesse &amp; Henning/ Waroona</td>
<td></td>
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<td>PO Box 153 Waroona 6215</td>
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<tr>
<td>West Murray</td>
<td>Cnr Husband and Nourumba Roads Barragup</td>
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<td>PO Box 129 Mandurah 6210</td>
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PEEL PND PROGRAMME
BALANCING POSITIVE AND NEGATIVE THINKING

• THE WAYS YOU HAVE LEARNED TO THINK, ACT AND FEEL AFFECT
  HOW LIKELY YOU ARE TO FEEL DEPRESSED

We have already looked at some of the ways you can increase your sense of
control and achievement

By examining the thoughts that go through your head when you have sad,
anxious or depressed feelings, you can identify your type of thinking

THERE ARE 3 KINDS OF THINKING:

1. NEUTRAL THINKING

Unimportant minute by minute thinking which makes up most of our daily
functioning “should I cook chicken or lamb tonight?”

2. POSITIVE THINKING

Self enhancing thinking. Focuses on the positive side of what ever it refers to.
“this is something I can really do well”

3. NEGATIVE THINKING

Self defeating thinking. Focuses on negative aspects. Negative effect on
mood. Tends to be self-fulfilling “this party is going to be terrible and I won’t
know what to say”

EXERCISE:
Difference between thinking and feeling

Which are thoughts and which are feelings?

1. I feel the picture looks better there
2. I am a good mother
3. I feel angry
4. I feel embarrassed
5. I am responsible for my partner’s happiness
6. I am busy
7. I feel tired
8. I feel happy
9. I feel you are being unfair
10. I want to make changes in my life
11. I feel jealous of my neighbour’s new car
12. I can’t do this
13. I feel frustrated when you don’t pick up your clothes from the bathroom floor
14. I am busy
15. I feel it is important to give children a lot of fruit in their diet

When we are depressed a lot of our thinking tends to be negative about:

- Ourselves
- The world around us
- Our future

When most of your thinking is negative you are more likely to:

Be frequently:

- Anxious
- Unhappy
- Lacking in self confidence and self esteem

- If you frequently think negative thoughts, over time your negative thoughts become automatic (very quick, reflexive, unconscious)

- We know that most feelings of sadness, anxiety, insecurity, fear, intense rage etc are triggered by automatic negative thoughts.

- We also know that this is a cycle that feeds on itself- the more negative thoughts you have, the worse you feel, the more negative thoughts you have-

- After a while you start to believe these thoughts. It’s like you have brainwashed yourself!!

**HOW DO I TURN THIS AROUND?**

**STEP ONE**

1. With practise you can learn to ‘catch’ your automatic thoughts

These thoughts are always there, interpreting what goes on in our world, how people speak to us, how they interact with us, how we respond to them. Etc.

Usually it doesn’t occur to us to question our automatic thoughts or self talk

We tend to assume that because we ‘think’ something, it is true or fact.

Beginning to tune into your thoughts is the first step to changing your thinking style

**EXERCISE: SELF-ASSESSMENT LIST**
BECOMING AWARE OF NEGATIVE THOUGHTS

1. Pay attention to changes in your mood. If you feel bad, chances are, a negative thought is associated with this feeling.

2. Count your negative thoughts. It will remind you to pay attention to what you are thinking.

3. Instant replay. Imagine what has happened until you track down the negative thoughts.

4. Watch for times your self-confidence disappears.

5. Look at activities that require great effort – think about what thoughts they prompt.

6. Become aware of times when you have trouble concentrating on making decisions. What are the negative thoughts getting in the way?

MANAGING THOUGHTS

1. DECREASING NEGATIVE THINKING

DEPRESSION = MORE NEGATIVE THOUGHTS = DOWNWARD SPIRAL

BELOW ARE SEVERAL TECHNIQUES TO HELP CONTROL NEGATIVE THINKING

1. THOUGHT INTERRUPTION:

When you notice you are having a negative thought, interrupt it and return to non-negative thoughts.

Say to yourself “I am going to stop thinking about that now.” Without getting distressed, just return to non-negative thoughts.

2) STOP!

Saying loudly/Shouting the word “stop”. This gives you the time needed to redirect back to non-negative thoughts. Over a 3-day period, you can slowly decrease the volume of your shouting down to a whisper. Alternatively, you can visualise a stop sign at these moments.

3) PHYSICAL CUE

Another technique is to wear a rubber band around your wrist (or some other physical cue) and when you notice a negative thought, give yourself a reminder to stop by plucking the rubber band.
4. WORRYING TIME:

Set aside a particular time of the day to worry over negative thoughts that just won’t disappear.

By deciding the ‘best time’ to mull over these thoughts you are not avoiding unpleasant subjects but choosing where to think about them.

Allow yourself a maximum of 30 minutes per day - always in the same place. Do nothing else but worry during this time.

5. THE BLOW UP TECHNIQUE:

Let your imagination run wild! Think about the worst possible outcome to the point of the ridiculous – if it’s ridiculous it ceases to be scary.

INCREASING POSITIVE THINKING

Reducing the number of negative thoughts you have will not automatically increase the number of positive thoughts.

Below are some techniques that assist in increasing the number of positive thoughts you have.

1. PRIMING:

Write down as many positive thoughts you can think of on prompt cards. Carry these around with you and read a few at different times of the day.

Keep a positive thoughts jar. Write on small pieces of paper happy events that have occurred in your life, also get your partner/friends to do the same.

Each morning pick one of these events and recall the story. You may like to share it again with your partner or child. Remember to add more happy events/thoughts as they occur.

2. USING CUES:

Select particular cues such as brushing your teeth, making the bed, driving around in the car, meal times etc to remind yourself to have a positive thought.

3. NOTICING WHAT YOU ACCOMPLISH.
When we are depressed we often do not give ourselves credit for what we do. Instead we belittle ourselves when something does not turn out quite right.

Keep track of all the things you accomplish during the day by keeping a list.

Remember your to "do list" (in session 5)? For example your list may include:

- Got up on time
- Ate nutritious breakfast
- Played with baby
- Had a good conversation
- Did 3 out of the five things I wanted to do today
- Watched TV programme I really wanted to see

You will find your day is full of activities you don't give yourself credit for!

4. POSITIVE SELF REWARDING THOUGHTS

Reward yourself silently after you do or think something positive by "patting yourself on the back".

It may be that you only get to think about doing something, or you may actually try it out. You still need to reward yourself for the effort.

The more you reward yourself, the more you will increase your desire to do well.

5. TIME PROJECTION

Realise that the depression will end eventually. Acknowledge how you feel, but use time to project how much better you will feel in a week, a few months etc.

This can help you hold on in a crisis period.

6. EVALUATING YOUR EFFORTS:

Don't forget the goal is to decrease the number of negative thoughts you experience and increase the number of positive thoughts.

Remember to reward yourself for putting the techniques into practice, acknowledge change no matter how small it may seem at the time.

Realise you will experience negative thoughts but the goal is to reduce their number.
PEEL PND PROGRAMME

EXERCISE: SELF-ASSESSMENT LIST

In order to help you tune into the type of thoughts, which are positive and negative, mark off on the self-assessment list, which of the thoughts you have experienced.

Indicate whether you have had any of these thoughts in the past month by placing a check mark by the thought

SET A

☐ Life is interesting
☐ I really feel great
☐ This is fun
☐ I have great hopes for the future
☐ I have good self-control
☐ That’s interesting
☐ A nice relaxing evening can sure be enjoyable
☐ I have enough time to accomplish the things I most want to do
☐ I like people
☐ I’m pretty lucky
☐ That’s funny (humorous)
☐ I don’t want to miss that event

SET B

☐ I’ll always be sexually frustrated
☐ I’m confused
☐ There is no love in the world
☐ I am wasting my life
☐ I am scared
☐ Nobody loves me
☐ I’ll end up living alone
☐ People don’t consider friendship any more
☐ I don’t have any patience
☐ What’s the use?
☐ That was a dumb thing for me to do
☐ I’ll probably have to be placed in a mental institution some day
☐ Anybody who thinks I’m nice doesn’t know the real me
☐ Existence has no meaning, or life has no meaning
☐ I am ugly
☐ I can’t express my feelings
☐ I’ll never find what I really want
☐ I’m not capable of loving
☐ I am worthless
☐ It’s all my fault
☐ Why do so many bad things happen to me?
☐ I can’t think of anything that would be fun to do
I don't have what it takes
Bringing kids into the world is cruel because life isn't worth living
I'll never get over this depression
Things are so messed up that doing anything about them is futile
I don't have enough will power
Why even bother getting up?
I wish I were dead
I wonder if they are talking about me?
Things are just going to get worse and worse
I have a bad temper
No matter how hard one tries, people aren't satisfied
Life is unfair
I'll never make good friends
I don't dare imagine what my life will be like in ten years
There is something wrong with me
I am selfish
My memory is lousy
I am not as good as so- and- so
My feelings are hurt easily
PEEL PND PROGRAMME

CHALLENGING YOUR SELF TALK:

DATE

STEP 1: TRIGGERING EVENT
(Briefly describe situation or event that lead to your emotional upset)

-----------------------------------------------------------------------------------------------------------------

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-----------------------------------------------------------------------------------------------------------------

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STEP 2: AUTOMATIC THOUGHTS /SELF TALK OR BELIEFS (list each of the things you said to yourself about the event or about yourself)

-----------------------------------------------------------------------------------------------------------------

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STEP 3: EMOTIONAL CONSEQUENCE (Describe how you felt and rate how intense it was on a scale of 1-10)

-----------------------------------------------------------------------------------------------------------------

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STEP 4: CHALLENGE /DISPUTE YOUR UNHELPFUL SELF-TALK (using challenging questions) eg. How else can I think about this?

-----------------------------------------------------------------------------------------------------------------

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DAILY MOOD RATING FORM

Please rate your daily mood for each day (how good or bad you felt), STARTING WITH TODAY, USING THE 9 POINT SCALE.

If you felt really great, the best you have ever felt or can imagine yourself feeling, mark 9. If you felt really bad, the worst you have ever felt or can imagine yourself feeling, mark 1. If it was a ‘so - so’ day, mark 5.

Very depressed---------------------------------------------very happy

1  2  3  4  5  6  7  8  9

You may find it helpful to rate various parts of the day, as well as an overall score. For example you may wish to give yourself 3 ratings from breakfast to lunch, lunch to tea, tea until bed.

Remember it is worth taking the time to do this for yourself!

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What have you noticed about why your mood changes? What makes you feel better?, What makes you feel worse? What can you and others do about this?
PEEL POST NATAL DEPRESSION PROJECT

REMEMBER!!

DEAR ALL,

PLEASE, PLEASE, PLEASE SEND BACK YOUR SURVEY MEASURES (IF YOU HAVEN'T ALREADY). WE REALLY NEED YOUR INFORMATION, IT IS VITAL TO IMPROVING OUR UNDERSTANDING OF WHAT WORKS BEST, FOR WHOM!

BEST WISHES,

SARAH DAVEY
PND PROJECT COORDINATOR
and

Pinjarra 6208

Dear ,

It's been 3 months since the Peel PND Programme finished, time sure flies! Please find enclosed some more survey measures for you to fill out.

We are really keen to find out how things have been going for you. Your feedback on the programme is extremely useful to enable us to determine what are the most effective ingredients of treatment for Postnatal Depression.

The information you provide for us will be of value not only to professionals working in the area, but also to the women and their families across Australia who will suffer with PND each year.

Please fill these out as soon as possible and return them in the reply paid envelope provided or you can drop them into the Community Health Centre at Peel Health Campus on Lakes Rd.

I hope life is treating you well!

Kind regards,

Sarah Davey
PND Project Coordinator
8/08/01
and

Mandurah 6210

Dear and,

We have now reached the 6 month mark since you completed the Peel PND Programme. Please find enclosed some more survey measures for you to fill out.

This is absolutely the last time you will have to fill anything out for the project!!

We are very interested in how things are going for you 6 months down the track. Your feedback on the programme is invaluable to us, as it will help determine treatment programmes for Post Natal Depression in the future.

Please fill these out as soon as possible and return them in the reply paid envelope provided, or you can drop them into the Community Health Centre on Lakes Road.

My best wishes for a happy and healthy future for you and your families,

With many thanks,

Sarah Davey
Peel PND Project Coordinator
17/10/01
Contact details:

For more information contact

Sarah Davey on

95318080 or

95358263

This project is supported by Peel Mental Health Service and is endorsed by Fremantle Hospital and Murdoch University Human Research and Ethics Committees

*This is a free service and childcare will be provided for day groups.

ATTENTION NEW PARENTS!

HAVE YOU HAD A BABY IN THE LAST 12 MONTHS?
PEEL PND PROGRAMME

EVALUATION SHEET

PARTICIPANT FEEDBACK
Mothers!
Yes another chance to fill in a form. What you think about the Peel PND programme as a treatment and support programme for mothers with postnatal depression will affect how it is run in the future. We would appreciate your opinions. Please mark the response that is closest to your opinion or feeling from the choices below. Feel free to make comments in the spaces provided.

1. Has attending the programme helped you to cope better with depressed feelings and your adjustment to postnatal problems? (Please circle your response)

1  2  3  4  5
of great help  moderate help  of help  of some help  of no help

Were there any particular aspects of your experience in the programme that you feel were of more benefit than others? E.g. general discussion of problems, support from programme etc.

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1. Do you feel your relationship with your baby is better for having attended the programme?

1  2  3  4  5
yes, very much better  much better  a little better  not really much help  of no help

If so, what aspects of the programme contributed to this?

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2. Do you feel your relationship with your older child/children is better for your having attended the programme?

1   2   3   4   5
yes, very much better a little better not really much help of no help
much better

If so, what aspects of the programme contributed to this?


4. Has attending the programme been of any assistance in helping you to cope better under stress?

1   2   3   4   5
of great help moderate help of help of some help of no help

If so, what aspects of the programme contributed to this?


5. Has attending the programme helped you to gain a greater sense of control over the direction of your life?

1   2   3   4   5
of great help moderate help of help of some help of no help

If so, what aspects of the programme contributed to this?


6. Do you feel your relationship with your partner is better for your having attended the programme?

1   2   3   4   5
of great help moderate help of help of some help of no help
If so, what aspects of the programme contributed to this?

7. Please give a rating according to how much you benefited from the following aspects of the programme:

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<th>2</th>
<th>3</th>
<th>4</th>
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<tbody>
<tr>
<td>Benefit</td>
<td>Of great benefit</td>
<td>of moderate benefit</td>
<td>of benefit</td>
<td>of some benefit</td>
<td>of no benefit</td>
</tr>
</tbody>
</table>

Please circle the response that is closest to your opinion or view from the choices below.

a) Opportunity to gain understanding about postnatal depression
   1 2 3 4 5

b) Opportunity to gain understanding about and discuss with others problems about my baby /children
   1 2 3 4 5

c) Opportunity to pay attention to building my social supports
   1 2 3 4 5

d) Involvement of my partner in dealing with my postnatal depression
   1 2 3 4 5

e) Discussion of personal experiences, past and present
   1 2 3 4 5

f) Generating support from group members
   1 2 3 4 5

g) Weekly homework exercises
   1 2 3 4 5

h) Handouts
   1 2 3 4 5

i) Learning relaxation strategies
   1 2 3 4 5

j) Scheduling pleasant activities
   1 2 3 4 5

k) Improving communication in my relationships
   1 2 3 4 5

l) Balancing positive and negative thinking
   1 2 3 4 5
m) Sorting out rational and irrational thoughts

n) Learning problem solving skills

o) Setting goals and developing a life plan

Any other comments you would like to make? ...

Thank you for your time, your feedback is greatly appreciated.
PEEL PND PROGRAMME
EVALUATION SHEET

We value your feedback on the sessions you have attended. In order to assist us in refining the service we provide, we would appreciate your comments.

1. What did you gain from your participation in the programme?

2. What ideas/skills or strategies have you begun using in your life that you learnt or were reminded about through this group?

3. How useful would you rate the knowledge you gained from this group? (please circle your response)

   1  2  3  4  5
not at all useful  moderately useful highly useful

4. What changes would you recommend to improve this group? (Eg. Content, length, presentation style etc.)

5. Additional comments
PEEL POST NATAL DEPRESSION PROJECT

Dear referrer,

Thank you for the ------ clients/patients you referred to the Peel Post Natal Depression Programme over the course of 2000-01

As you know, Post Natal Depression is a mood disorder that has considerable impact on mothers, infants and their families. The Peel PND project was launched in an effort to assess what are the most effective treatment strategies to successfully combat PND

People you referred may have been involved in either the 10-week Cognitive Behavioural Therapy group programme or received 10 weeks of individual Cognitive Behavioural therapy. A 6-week group programme was also offered for some of the fathers/male partners

As part of this process, we are keen to have your feedback regarding the effectiveness of this programme with the view of incorporating your suggestions in future programmes.

Please find enclosed a stamped self addressed envelope for your completed questionnaires.

Thank you for your continued support and interest,

Yours sincerely,

Sarah Davey
PND Project Coordinator
PEEL PND PROGRAMME - REFERRER FEEDBACK

1. On average, how often have you seen the patients / clients since you referred them to the Peel PND Programme?

2. How did you find out about the Peel PND programme?
   a) Professional colleagues
   b) Media i.e. newspaper, radio
   c) Clients/patients themselves

3. Overall how satisfied were your clients/patients with the service the Peel PND programme provided?

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<th>4</th>
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<tbody>
<tr>
<td>Extremely satisfied</td>
<td>Satisfied</td>
<td>Not at all satisfied</td>
<td></td>
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4. Overall, how satisfied were you with the service provided?

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<th>5</th>
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<tbody>
<tr>
<td>Extremely satisfied</td>
<td>Satisfied</td>
<td>Not at all satisfied</td>
<td></td>
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5. In your view, what were the most effective components of the programme?

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<tbody>
<tr>
<td>Extremely effective</td>
<td>Effective</td>
<td>Not at all effective</td>
<td></td>
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</table>

Please circle the response that is closest to your opinion or view from the choices below

a) Information about Post Natal Depression  
   b) Building social support networks  
   c) Learning relaxation strategies  
   d) Monitoring daily mood  
   e) Scheduling pleasant activities  
   f) Time management strategies  
   g) Learning to monitor thoughts  
   h) Learning more helpful ways of thinking  
   i) Learning stress management strategies  
   j) Learning problem solving skills  
   k) Learning to improve communication skills  
   l) Planning to prevent relapse
6. How would you rate the changes in depressive symptoms that you observed in your patient/clients?

1  2  3  4  5
Significant improvement moderate improvement no improvement

7. How would you rate the changes in anxiety symptoms you observed in your patients/clients?

1  2  3  4  5
Significant improvement moderate improvement no improvement

8. Did attending the PND program assist your clients/patients in coping better under stress?

1  2  3  4  5
Significant improvement moderate improvement no improvement

9. What other changes did you notice in your clients/patients?


10. How satisfied were you with the process of referring clients/patients to the Peel PND Programme?

1  2  3  4  5
Extremely satisfied Satisfied not at all satisfied

11. How satisfied were you with the feedback you received from the Programme regarding your clients?

1  2  3  4  5
Extremely satisfied Satisfied not at all satisfied

12. How do you prefer feedback to be given?
   a) written
   b) phone contact
   c) face to face
   d) other

365
13. What changes would you suggest to the programme?

other comments...
Moderators' guide (framework from Vaughn et al, 1996):
Introduction:

"Welcome back everyone thanks once again for your attention and for agreeing to give us some feedback about your experiences. You are all aware that this is a research project and we are interested in finding out what sort of treatment works best for whom. We want to use the information you give us to improve the programme we offer, and so would encourage you to be brutally honest, we have very broad shoulders and need your views on what works and what doesn't. I have some set questions that I would like to get through by the end of our time this afternoon. We have roughly 30 minutes for discussion."

"As you all agreed, we are audiotaping this session and taking handwritten notes as a back up. The group guidelines we set back in week one apply as usual, one person speaking at a time. We accept all points of view without judgment and we are respectful of each other and we maintain confidentiality at all times. You will all remain anonymous, on this tape. If you would prefer you can use a different first name. As we agreed, the tape will only be used for this research and will be destroyed after use."

Warm up:

A separate warm up was omitted, this was not needed because the group knew each other very well and the warm up had occurred in the first half of the session.

Questions:

1. What do you remember we have covered in the programme?
2. Looking back, what do you see as the most useful aspects of the programme?
3. What changes have you noticed in yourself? How are you different?
4. What changes have you noticed in your families?
5. What changes would you suggest to the programme?
6. What would you have liked more of?
7. What would you have liked less of?
8. Would you recommend this program to others?

Wrap up:

- "Unfortunately, we are almost out of time
- Summary of the points raised and suggestions made
- Check for accuracy from members

Closing statements:
- Thanking subjects for participation and valuing the importance of the information they have provided.
- Reinforcement of confidentiality and anonymity of information provided.
- Feedback from the facilitators about their experience within the program
- Setting of date for follow up meeting.
- Farewells.
PEEL PND PROGRAMME

Your feedback on the programme is extremely useful to us to enable us to determine what are the most effective ingredients of treatment for Post Natal Depression. The information you provide will be of value not only to professionals working in the area, but also to the women and their families across Australia who will suffer from PND each year.

I GIVE CONSENT FOR THE FEEDBACK SESSION TO BE AUDIO TAPE D FOR RESEARCH PURPOSES.

I UNDERSTAND THAT THE INFORMATION I GIVE IS CONFIDENTIAL AND WILL BE USED ONLY BY THE PRINCIPAL RESEARCHER (SARAH DAVEY).

I UNDERSTAND THAT THE AUDIO TAPE WILL BE DESTROYED AFTER USE.

SIGNED:

DATED:

Witness: