

## The impact of maternal depression on familial relationships

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### Summary

*Depression is one of the most prevalent psychiatric illnesses. It is particularly common in women of childbearing age. It is recurrent and tends to have a chronic course and is often comorbid in nature. It is important to view depression within its social context, as it is a disease, which impacts not only the individual but also the wider community. Evidence abounds as to the negative impact of maternal depression on children, husbands/partners, and family. Children of depressed women show deficits in social, psychological, and cognitive domains and are at increased risk for depression themselves and other psychiatric illness such as conduct disorder. They are also at an increased risk for child abuse. The mechanisms by which maternal depression may lead to child psychopathology including genetics, poor parenting, modelling, and environment are explored. Many children with depressed mothers cope well and escape negative effects; consequently the concept of resilience is elucidated. Research shows that a significant percentage of men become depressed when their wives/partners are depressed particularly if they have postnatal depression. There is an increase in marital discord and conflict within families of depressed women, all of which can have a deleterious effect on children. Children with two depressed parents are at an elevated risk of a negative outcome as compared to those with only one depressed parent. Finally the various interventions, management, and recommendations are examined.*

### Introduction

The impact of maternal depression on family relationships is a major public health concern, as research suggests that a large number of children and spouses/partners are exposed to maternal depression. The National Comorbidity Survey (NCS) estimated the prevalence of current (30 day) major depression to be 4.9% with a relatively higher prevalence in females, young adults, and persons with less than a college education. The prevalence estimates for lifetime major depression was 17.1% (Blazer *et al.*, 1994). Women show a greater prevalence of depressive disorders than men, especially during the child-bearing years. The NCS study found that the lifetime prevalence for major depression is 21.3% for females and 12.7% for males, a female to male ratio of 1.7 (Kessler *et al.*, 1994). Other studies have confirmed that women are approximately twice as likely as men to suffer from depression (Weissman *et al.*, 1996; Wu & Anthony, 2000). This difference appears to hold true on an international scale. In a cross-national epidemiological survey, Weissman *et al.* (1996) found that the rates of major depression were higher in women than in men in all 10 countries studied although the extent of the sex difference ranges from 1.6: 1 in Taiwan to 3.5: 1 in Germany. Depressive symptoms in women commonly occur in association with reproductive events, such as the premenstrual period (Abramowitz *et al.*, 1982),

during pregnancy (O'Hara *et al.*, 1990), and post-natally (Kumar & Robson, 1984). The most vulnerable women are working class, unemployed mothers with young children. These women have prevalence rates for depression as high as 40% (Brown & Harris, 1978). Along with its high prevalence rates, depression tends to be chronic or recurrent with over 50% of depressed individuals having more than one depressive episode (Belsher & Costello, 1988). People who have become clinically depressed can expect up to five to six episodes in their lifetime (Zis & Goodwin, 1979). Some studies have shown that women have a more chronic and recurrent course of depression than men (Keitner *et al.*, 1991; Winokur *et al.*, 1993). Depression has high comorbidity, with anxiety disorders, substance abuse, and eating disorders being the most common comorbid disorders (Kessler *et al.*, 1996). Therefore, it is evident that depression has high prevalence rates among women, is recurrent and comorbid. Women are the main caregivers for children and to this end the adverse effects of depression on their children is a major health issue.

### Social and interpersonal aspects

In the past depression was seen as a problem, which affected the individual person with little impact on the wider community (Downey & Coyne, 1990).

In order to study the impact of maternal depression on family relationships it is important to appreciate that depressive illness is a heterogeneous entity, which should be seen within a social context. The seminal work of Brown & Harris (1978) introduced the idea that social factors are particularly important to women. Being working class, having young children at home, having lost a mother in childhood, and having a poor relationship with a spouse were vulnerability factors that provoke the onset of depression. Conversely, a confiding relationship could be protective against depressive episodes. Just as our social environment influences depression, depressed people are less likely to elicit positive social interactions from others, this is one of the central posits of the interpersonal theory of depression that Coyne (1976) espoused. Coyne's interpersonal theory of depression proposed that the behaviour and attitudes of the depressed person can result in an environment where the person is rejected by their significant others. Moreover, there has been research showing that negative interactions with social network/peers lead to negative interactions from the depressed woman to her child. In a study of 14 mother-child dyads, Dumas (1986) found that mothers were significantly more aversive towards their children on days in which they had experienced a high proportion of aversive interactions with adults than on days in which they had not. Depressed women have high rates of marital conflict (Johnson & Jacob, 1997), higher divorce rates (Coyne, 1990), and are more likely to marry people who have a psychiatric illness or have a family history of illness (Merikangas & Spiker, 1982). Downey & Coyne (1990) describe that children will vary to the extent they are exposed to their mothers' depression, other forms of psychopathology, marital conflict and to undesirable living conditions. Therefore, the impact of maternal depression on children should be seen within a social and more specifically a family framework.

#### *Maternal depression and children—historical perspective*

Originally research into the impact of parental depression with respect to children was in part an unexpected finding, borne out of research on the children of schizophrenic patients. Children of depressed parents were used as controls in these studies and it was discovered that they were as prone to psychopathology as children of schizophrenic parents (Beardslee *et al.*, 1983; Downey & Coyne, 1990). Studies of depressed children revealed that they frequently had parents with a psychiatric illness, in particular depression (Beardslee *et al.*, 1983). Research then commenced, and it was seen that children whose mothers were depressed were at risk for major depression, anxiety disorders, and markedly poorer overall functioning (Beardslee *et al.*,

1983; Billings & Moos, 1983; Conners *et al.*, 1979). Researchers have criticised these early studies for their methodological flaws: reliance on self-report measures of depression rather than structured diagnostic interviews and the tendency for consequent falsely elevated accounts of depression (Downey & Coyne, 1990; Beardslee *et al.*, 1983). In their comprehensive review, Beardslee and colleagues (1983) examined 24 studies of children with a parent with an affective illness. Beardslee's group comments on the limited methodologies including limited numbers, lack of control groups, and inconsistent assessment methods. Despite these methodological flaws this early review found rates of psychiatric disorder in the children of parents with affective illness in the order of 40–45%. They identified that children's problems occurred in many domains: depressive symptoms, conduct problems, personality disorder, adjustment difficulties, and drug abuse problems. Encouragingly, LaRoche (1989) reports on the methodological improvements that have occurred since Beardslee and colleagues 1983 review, specifically the use of direct interviews with children, standardized diagnostic criteria, and the employment of normal control groups.

#### *Maternal depressive characteristics*

Weissman & Paykels' (1974) seminal book on the study of the social relations of depressed women directed attention to the potential for parenting of depressed mothers to be altered and harmful to their children. The parenting style of depressed mothers has been shown to have a negative effect on their children (Field *et al.*, 1985; Cox *et al.*, 1987; Bettes, 1988; Billings & Moos, 1983; Gordon *et al.*, 1989). Of course it is well to be mindful that some depressed women are able to interact positively with their children (Cox *et al.*, 1987). Depressed mothers show flat affect, provide less stimulation and less contingent responsiveness than control mothers (Field *et al.*, 1984; 1985) and they are more negative and unsupportive (Lovejoy, 1991). Cox *et al.* (1987) compared an urban working class sample of depressed mothers in the community with two-year old children to a control group of non-depressed mothers and children. Results showed that in general depressed mothers were less responsive to their children and less able to sustain social interaction. Bettes (1988) recorded face-to-face interactions between 36 mothers and their 3–4-month-old infants. Depressed mothers did not modify their behaviour according to the behaviour of their children; instead, they responded more slowly and were less likely to use the exaggerated intonation typical of mothers' speech with their infants.

Depressed mothers have also been found to be emotionally insensitive and less attuned to their infant's emotional state (Cox *et al.*, 1987). Puckering

(1989) describes elegantly the depressed mother who is, 'physically present but psychologically absent, unable to catch the finer cues from the child and build on these'.

Depressed mothers may also display aggression, critical comments, and irritability. Cohn and colleagues (1990) examined depression's influence on mother-infant interactions at two months postpartum in 24 depressed and 22 non-depressed mother-infant dyads. Depressed mothers showed increased negative affect, primarily irritation or intrusiveness during the face-to-face interaction. Both the proportion of depressed mothers showing negative affect and the proportion of negative affect they displayed were significantly greater than that observed among non-depressed women. Webster-Stratton & Hammond (1988) found that depressed mothers were more critical than non-depressed mothers.

Depressed mothers can be rejecting and hostile towards their child; Colletta (1983) found that in a sample of 75 mothers between the ages of 15 and 19 years old maternal depression was related to hostile, indifferent and rejecting patterns of mother-child interaction. A National Institute of Mental Health study reported that depressed mothers were more likely than controls to be unhappy, tense, and inconsistent with their children (Davenport *et al.*, 1984).

Depressed mothers make more negative appraisals of their children's behaviours, which may impact their maladaptive parenting styles (Cummings & Davies, 1994). Alternatively, other researchers have found that depressed mothers can make accurate observations of their child's behaviours, consistent with teachers and independent observers (Lovejoy, 1991). Field *et al.*, (1988) found that even young infants of depressed mothers show 'depressed behaviour' compared to infants of non-depressed mothers. This depressed behaviour was characterized by less positive affect.

Depressed mothers have impairments in child management techniques. They have been described as more inconsistent and ineffectual (Susman *et al.*, 1985). Kochanska and colleagues (1987) reported that affectively ill mothers had a tendency to avoid confrontation with their children and were less likely to achieve a compromise with their children as compared to well mothers. Some depressed mothers rely on more directing forceful communication.

Finally, maternal depression has been shown to influence maternal behaviours associated with child health. In a longitudinal analysis of data obtained from women in 1988 and 1991, Leiferman (2002) reported that maternal depression is associated with an increased likelihood of smoking, not administering vitamins to a child, and not restraining children appropriately in car seats.

Bartlett and colleagues (2001) study of Emergency Department use found that inner city mothers with high levels of depressive symptoms are 30% more

likely to report taking their children to the Emergency Department for asthma care than a control group. One of the hypothesized reasons for increased Emergency Department usage is that depression diminishes the mother's coping skills, making her unable to cope with the demands of her child's physical ailment. The increased contact with the Emergency Department can also be seen as a cry for help, a means by which the mother can access help for herself, which she may find less stigmatising than contacting a family doctor or psychiatrist.

## Effects on children

### *Physiological development*

Fields and colleagues' work has revealed that newborns of depressed mothers appear to have a 'profile of dysregulation' in their behaviour, physiology, and biochemistry, which may stem from prenatal exposure to a biochemical imbalance in their mothers (Field, 1998). This dysregulation is typified by limited responsivity on the Brazelton (Abrams *et al.*, 1995), excessive indeterminate sleep, elevated nor-epinephrine and cortisol levels (Field, 1998), right frontal EEG activation (a pattern that is noted in chronically depressed adults) (Jones *et al.*, 1997), lower vagal tone, signs of neurological delays at six months, and less social referencing at nine months (Field, 1998). Ashman & Dawson (2002) hypothesize that children of depressed mothers are at risk for poor outcomes because of the effect of depressed mothers' behaviour on early developing psychobiological systems related to emotion and regulation. Zuckerman *et al.* (1987) have shown that sleep problems of infants at eight months of age were associated with maternal depression. In general studies have shown that children of depressed parents are in poorer physical health than children of control parents (Billings & Moos, 1983).

### *Psychiatric illness*

There is an increased incidence of depression, conduct disorders, and attention deficit disorders among the children of depressed mothers (Beardslee *et al.*, 1983). Beardslee and colleagues (1993) explored the effects of parental affective disorder on children using a longitudinal analysis in a non-referred health maintenance organisation. Four years after initial examination, the rate of major depressive disorder was 26% in children of parents with affective disorder compared with 10% in those that had no parents with affective disorder. Field (1988) found that even young infants of depressed mothers show 'depressed behaviour' compared to infants of non-depressed mothers. This depressed behaviour was characterized by less positive affect and lower activity level. Moreover this behaviour generalized to

their interactions with non-depressed adults as early as three months of age.

Weissman, Warner and colleagues (1992;1997) studied 220 children aged six and over of depressed and non-psychiatrically ill women; they were followed up two and 10 years later. At the initial interview children of depressed compared to non-depressed parents (controls) had significantly increased risk for major depressive disorder, anxiety disorder, and markedly poorer overall functioning. The two-year incidence rate for depression was 8.5% with all of the incident cases of major depression occurring in offspring of depressed parents. At the 10-year follow-up they found increased rates of major depression, phobias (a three-fold increase), panic disorder, and alcohol dependence (a five-fold increase) as compared to children of control parents. The Yale Family study ascertained that depression in parents increased the risk of depression in children (aged 6–17 years) relative to a matched control group (Weissman *et al.*, 1984). Moreover, depression plus panic disorder or agoraphobia in parents conferred an additional risk of depression and anxiety disorders in the children. Panic disorder in the parents conferred more than a three-fold increased risk of separation anxiety in the children. Other factors that increased the risk to children were degree of familial loading for psychiatric illness, parental assortative mating, and parental recurrent depression. Hammen *et al.* (1987) compared children of mothers with unipolar or bipolar depression with children of mothers who had a chronic medical illness and children of normal mothers and found that children of mothers with an affective disorder, especially unipolar depression, had higher rates of diagnosis. Orvaschel *et al.* (1988) found that 41% of high-risk children met criteria for at least one psychiatric disorder; affective disorders, attention deficit disorders, and anxiety disorders were all more prevalent in children of depressed parents. Studies have shown that children of depressed parents have higher rates of conduct disorder compared to controls (Beardslee *et al.*, 1987; Hammen *et al.*, 1987). Weissman *et al.* (1999) reported a significant morbidity and potential mortality from suicide in adulthood with adolescent onset major depression.

#### *Attachment problems*

Effective, adequate parenting is linked to optimal attachment in children (Ainsworth, 1973). Murray (1992) reported that infants of postnatally depressed mothers had a worse performance on object tasks and were more insecurely attached to their mothers than control infants. Studies have reported that maternal depression increases risk for insecure attachment (Teti *et al.*, 1995; Gaensbauer *et al.*, 1984) particularly so if the depression is severe and chronic; Radke-Yarrow and colleagues (1985) exam-

ined patterns of attachment in mothers with bipolar, unipolar, minor depression, or no psychiatric disorder. Results showed that insecure attachment was more common among children whose mother had a depressive episode (bipolar or unipolar) than among those whose mothers had minor depression or no illness. Moreover, insecure attachment was more frequent in mothers with bipolar depression than unipolar depression. Avoidant or ambivalent attachments were associated with histories of severe depression. Carter *et al.* (2001) examined the relationship between maternal depression in pure and comorbid forms and mother-infant interactions and infant attachment. They found that women who experienced a depressive illness as well as anxiety, substance or eating disorder had less optimal play interactions with their four-month-old infants than either mothers who had experienced depression only or mothers who had no psychopathology. By 14 months, 80% of infants in the comorbid group were classified as having insecure attachment.

#### *Other psychological problems*

The regulation of emotion and social interaction has been analyzed showing that children of depressed women sometimes showed heightened distress and preoccupation with the conflicts of others, especially disturbances among adults. These children were poor at maintaining friendly social interactions, sharing, and helping their playmates. They also had difficulty modulating hostile impulses; they showed more maladaptive patterns of aggression toward peers and adults (Zahn-Waxler *et al.*, 1984). Children of mothers with depression have poor self-concept, less positive self-schemas, and a more negative attributional style (Jeanicke *et al.*, 1987).

Maternal depression has been shown to impact cognitive development. Cogill and colleagues (1986) performed a longitudinal study following 94 women and their first-born children. The children's cognitive functioning was assessed at age four; significant intellectual deficits were found in the children whose mothers had suffered depression, but only when this depression occurred in the first year of life. Children of parents with maternal depression have been found to have deficits in social and academic skills (Hammen *et al.*, 1987; Richman *et al.*, 1982).

There may be gender differences in the psychological sequelae. A few studies suggest that pre-adolescent boys of mothers with maternal depression may be more at risk for behavioural problems, whilst adolescent girls are more at risk for depression (Cummings & Davies, 1994). Rutter & Quinton (1984) reported that the risk of a poor outcome might be higher for boys. Thomas & Forehand (1991) found that mothers' depressive moods had a significant relationship with daughters' internalizing

problems, and fathers' depressive mood was significantly related to sons' problems.

#### *Child abuse and infanticide*

Studies have shown that psychiatric disorders in general and depression in particular may be a potential risk factor for child abuse (Kinard, 1996; Cassady & Lee, 2002; Swanson *et al.*, 1990).

Jennings and colleagues (1999) report that thoughts of harming children were more frequent in depressed mothers; 100 clinically depressed mothers with a child under three years were evaluated and compared to a control group of 46 non-depressed mothers. Results showed that 41% of depressed mothers compared to 7% of control mothers admitted to thoughts of harming their infant.

Studies of mental health problems and child abuse have often implicated maternal depression as well as substance misuse (Swanson *et al.*, 1990; Dinwiddie & Bucholz, 1993). Chaffin & Kelleher (1996) used the Epidemiological Catchment Area (ECA) prospective data to examine risk factors for child abuse. Substance abuse disorders were strongly associated with the onset of both child abuse and neglect (relative risk = 2.90 and 3.24 respectively) but depression was found to be a strong risk factor for physical abuse (relative risk = 3.45).

Although rare, depressed women have committed filicide—the murder of a child by a parent. McKee & Shea (1998) studied 20 adult women who were charged with murdering their children who were referred to a psychiatric hospital for pre-trial evaluation. Clinically 80% had a diagnosable mental disorder with 65% suffering from a major affective or thought disorder at time of arrest. Forty percent were diagnosed with a psychotic or paranoid disorder and 25% suffered from major depression at the time of the offence. There was a consistency of characteristics when compared to other countries.

#### **Maternal depression and child psychopathology: hypothesized causal mechanisms**

Multiple hypotheses for the mechanisms by which maternal depression affect children have been proposed (Goodman & Gotlib, 1999, 2002; Downey & Coyne, 1990; Cummings & Davies, 1994). Most conclude that multiple mechanisms are involved with interplay between risk factors. Mechanisms posited include: (1) having a depressed mother bestows the child with an increased genetic predisposition (Rutter, 1990); (2) dysfunctional neuro-regulatory systems, with elevated stress hormones, lower vagal tone, and cortical activation hampering emotional regulation processes and pre-

cipitating vulnerability to depression (Field, 1998); (3) inadequate parenting interfering with parent-child relationships leading to attachment problems and disruption of normal child development (Goodman & Gotlib, 2002); (4) modelling of depressed behaviour resulting in children adopting some of the features of depression (Puckering, 1989; Goodman & Gotlib, 1999) and (5) stressful lives of children with depressed mothers due to possible combinations of adverse circumstances, marital disharmony, and paternal illness (Downey & Coyne, 1990; Goodman & Gotlib, 1999).

#### **Resilience and protective factors**

Resilience studies how children overcome adversity to achieve good developmental outcomes. Research on resilience has become a topic of increasing interest over the past 30 years (Masten & Coatsworth, 1998). This is particularly pertinent when discussing the impact of maternal depression on children, as it is well known that not all children with a depressed mother will develop psychopathology or have an adverse outcome. Indeed some children of depressed parents can cope effectively (Williams & Carmicheal, 1985). Even when children have been subject to very severe stressors and adversities no more than half have negative outcomes (Rutter, 1985).

Few studies have ascertained which factors are associated with better outcomes in children with depressed parents (Goodman & Gotlib, 2002). Masten & Coatsworth (1998) have identified consistent qualities of children found to be resistant to a variety of adverse circumstances (e.g., war and family violence) which include: factors within the family like close relationship to parents/guardian, authoritative parenting, connected to extended family; characteristics of the individual such as good intellectual functioning, easy temperament, high self esteem; and factors outside the family of good schooling and satisfactory relationships with other adults. This confirmed Garmezy's (1985) triad of factors that appear to be consistently associated with resilient children: dispositional attributes, family cohesion and warmth, and supportive figures in the environment.

Family discord may be one of the mechanisms by which children of depressed parents are adversely affected particularly if the disharmony or arguing involves the child (Rutter & Quinton, 1984). Rutter (1985) has found that a mentally healthy spouse, the maintenance of a good relationship with one parent and restoration of family harmony are all protective factors. Rutter (1990) also suggests that children are less likely to be affected if parental disorder is mild, of short duration, and not associated with family discord or poor parenting. There is evidence that both a good relationship with one or more parents

and peer relationships are protective (Pelligrini *et al.*, 1986).

Fathers increase the risk for poor outcomes in children whose mothers are depressed if they are absent or if they have psychopathology. Conversely fathers who are healthy have the potential of being a protective factor (Goodman & Gotlib, 1999; Belsky, 1984). Other family members may act as a buffer. Grizenko & Pawliuk (1994) reported that good relationships with grandparents could also be a protective factor.

Studies have identified good social and cognitive skills as being characteristic of resilient children (Beardslee *et al.*, 1987). Beardslee & Podorefsky (1988) found that the children and young adults that functioned well despite having parents who had major affective disorder had characteristics including self-understanding, a deep commitment to relationships, and the ability to think and act separately from their parents. Pelligrini & colleagues (1986) found that social problem-solving ability, internal locus of control, self-esteem, and self-perceived competence as well as a good social network were related to psychiatric well being in children whose parents had bipolar affective disorder.

### **The impact of maternal depression on husbands/partners**

Depressed women have the potential to significantly impact their partners' moods. Depression is often accompanied by relationship difficulties with a high prevalence of marital disharmony (Weissman & Paykel, 1974; Briscoe & Smith, 1973) and divorce (Coyne, 1990). Spouses and partners of depressed women are oft forgotten in the clinical situation (Downey & Coyne 1990).

#### *Marital disharmony*

The association between depression and marital disharmony has been known for at least three decades (Briscoe & Smith, 1973). There is often difficulty ascertaining which came first, disharmony, or depression, with the direction of causality being difficult to elucidate. Depression may precede the marital problems and be seen as the activator of the conflict (Beach *et al.*, 1990) or cause significant dysfunction leading to conflict (Coyne & Benazon, 2001). Moreover, marital distress is a good predictor of depressive relapse. Hooley & Teasdale (1989) discovered that patients with higher marital satisfaction scores were less likely to suffer a clinically significant return of their depressive symptoms. Those who are dissatisfied with their partners or whose partners are non-communicative are more likely to have a relapse of their depressive illness after childbirth (Marks *et al.*, 1992). Coyne *et al.* (2002)

conclude that however marital problems develop, they are associated with poorer outcomes. This confirms Rounsaville and colleagues (1980) finding that women with marital disputes who were in treatment (antidepressants and maintenance psychotherapy) showed less improvement in their symptoms and social functioning and had a greater tendency to relapse. Benazon & Coyne (2000) found that spouses living with a depressed patient reported more depressed mood than the general population and experienced specific burdens. Six percent of the spouses in the study met criteria for major depression and the increased burden of living with a depressed partner was given as the reason for this. The authors suggest that the spouse's burden could be an important point of intervention. Fadden and colleagues (1987) studied the burdens of caring by interviewing 24 spouses of patients suffering from persistent depression to ascertain how they were affected by the patient's illness. The spouses reported restrictions in social and leisure activities, a fall in family income, and a considerable strain on family relationships. The spouses often endured the effects without complaint to the patient.

#### *Assortative mating*

Assortative mating is a well-documented and consistent phenomenon where depressed persons tend to choose partners and have children with persons who have a psychiatric illness or a family history of psychopathology (Merikangas, 1982; Merikangas *et al.*, 1988). This has important implications, as when a depressed person's spouse is also depressed there is an increased risk of marital disharmony and divorce (Merikangas, 1984). Assortative mating has been shown to put the offspring at increased risk for developing the disorder (Merikangas *et al.*, 1988) due not only to the increased genetic loading of having two parents with psychiatric illness but also the stressful environment that comes with having two psychiatrically unwell parents.

#### *Postnatal depression*

The impact of postnatal depression on husbands and partners has a wealth of its own literature. In 1931 Zilboorg wrote about the difficulties facing fathers in adjusting to parenthood and listed case reports describing fathers with adjustment problems. Lovestone and Kumar (1993) also reviewed the problems fathers have in this new role. Studies have shown that poor marital relationship is a strong trigger for postnatal depression (O'Hara *et al.*, 1984).

Postnatal depression is relatively common with reported prevalence rates ranging between 10–22% (Burt & Stein, 2002). The partners of these women are themselves at risk of mental health problems (Lovestone & Kumar, 1993; Harvey & McGrath,

1988; Ballard *et al.*, 1994). Harvey & McGrath (1988) interviewed the spouses of 40 women admitted to a psychiatric Mother and Baby Unit (MBU). This group of spouses was compared to a group of spouses of women who had not shown any psychiatric disorder in the puerperium. They found psychiatric morbidity present in 42% of the index group and 4% of the comparison group; the main diagnoses were major depressive episode and generalized anxiety disorder. Lovestone & Kumar (1993) found that 12 out of 24 spouses of women admitted to a psychiatric MBU were themselves psychiatrically ill. This 50% rate was higher than in control groups of men whose partners remained well after childbirth and men whose partners were admitted to a psychiatric hospital with non-puerperal illness. Ballard and colleagues (1994) studied a community sample of 200 couples at six weeks and six months post delivery. The prevalence of depression was 9.0% in fathers at six weeks postpartum and 5.4% in fathers at six months postpartum. Areias *et al.* (1996) found that 'postnatal' depression in fathers was associated with a previous history of depression themselves and the presence of depression in their wives or partners during pregnancy and soon after delivery. Depression in both mothers and fathers impact on their children, and there may be a possible additive effect (Brennan *et al.*, 2002).

Fortunately there is evidence that supportive partners play a major role in protecting women from postpartum relapse. Marks and colleagues (1996) showed that women with psychiatric histories who did not relapse in the six months following delivery had partners who were more positive about them than control women. Partner support has therefore been used as part of the treatment for women with depression (Misri *et al.*, 2000).

### Paternal depression: impact on children

Compared to the large body of evidence documenting an association between maternal depression and psychopathology in children, the research on the role fathers play in the genesis of these problems is less evident. Phares & Compas (1992) examined the inclusion of fathers and mothers in clinical child and adolescent research. Their comprehensive review showed that only eight studies (1%) involved fathers only. It has been hypothesized that paternal depression and maternal depression would have an additive effect in that these children would have more adverse outcomes than children where only one parent is depressed (Dierker *et al.*, 1999; Brennan *et al.*, 2002). Brennan and colleagues (2002) examined the relationship between maternal depression, paternal psychopathology, and adolescent diagnostic outcomes in a community sample of 522 Australian families. Maternal depression and paternal depression indeed had an additive effect on youth

externalising disorders (attention deficit hyperactivity disorder, conduct disorder, oppositional-defiant disorder and substance abuse). Moreover maternal depression interacted with both paternal depression and paternal substance abuse in predicting youth depression but not youth non-depressive disorders. Alternatively, in families in which the mother is depressed and the father remains well, the father may act as a buffer protecting the child from the adverse effects (Tannenbaum & Forehand, 1994).

### Management 1. Depressed women and their partners

Evidence has shown that harmonious, confiding relationships can protect some people from depression, and improve treatment outcomes (Beach *et al.*, 1990; Brown & Harris, 1978). Relatives of depressed women often are unsure of how to cope with depressive episodes in their loved one. Partners/spouses can feel excluded by the medical system feeling deprived of information and advice (Fadden *et al.*, 1987). Consequently psycho-education for couples and relatives, joint evaluation and couple/marital therapies are paramount in the management of a depressed woman and her partner.

#### *Couple evaluation*

The high prevalence rates of psychiatric morbidity amongst men whose partners have postnatal illness, assortative mating and the high rates of marital discord in these families all support screening the partners of women who are depressed. Evaluation and even treatment should include both partners as the mental health of one spouse/partner may affect the psychological well being of the other. Ideal treatment programs begin with an explanation of the illness, including positive prognostic factors and information about how patients and their partners can best cope with it.

#### *Psycho-education*

Psycho-educational groups, providing family members with information about depression, its management, and coping strategies, are effective in increasing knowledge, attitude and adjustment in families with a depressed relative. Moreover families who attend psycho-educational groups have reported significantly more satisfaction with the experience relative to traditional family group meetings (Anderson *et al.*, 1986). A Canadian study by Misri and colleagues (2000) investigated the impact of partner support in the treatment of depression. Patients with postnatal depression were randomly assigned to two treatment groups. The control group consisted of patients only while the support group

consisted of patients and their partners. Compared to the control group, the support group evidenced a significant decrease in depressive symptoms and other psychiatric conditions. Although this study had small number of patients ( $n = 29$ ), it is encouraging that a simple intervention, such as including partners in psycho-educational discussions improved patients' symptoms.

#### *Couple/marital therapy*

There is a growing body of evidence demonstrating that marital/couple therapy is efficacious in reducing depressive symptoms (Jacobson *et al.*, 1991, 1993; Beach & O'Leary, 1992). Beach and colleagues (1998) in their review of the literature on marital therapy report that it can both decrease depressive symptoms and improve marital satisfaction. The process enhances communication between the couple. The aims of therapy include: resolving relationship difficulties and encouraging positive exchanges between the couple. It can be used in combinations with other treatments (Jacobson *et al.*, 1991). Beach *et al.* (1998) describe three situations where marital therapy should be considered instead of individual therapy. These can be applied to depressed women and their partners: (1) the depressed women are more concerned about the marital difficulties than their depression; (2) the depressed women feel that marital problems contributed to or caused their depression and (3) individual symptoms are less important to the depressed women than their marital difficulties. Non-compliance for marital therapy by either partner will of course be an obstruction to treatment.

### **Management 2. Depressed women and their children**

As many as 68% of depressed patients refuse or non-comply with pharmacological management (Ramana *et al.*, 2003). The available pharmacological treatments are very effective in treating depression and are obviously one of the most important methods of treating women with depression, therefore reducing the risk of a harmful outcome to her child. The reluctance of some women to use pharmacological treatments and the potential long-term effects of maternal depression to children highlight the need for alternative treatments and interventions. Cooper & Murray (1997) suggested that addressing maternal depressive symptoms alone might not be sufficient to affect the children's behavioural problems or attachment ratings. Gladstone & Beardslee (2002) critically reviewed the available literature and underscored that depression impacts children differently at their various

developmental stages and the approach to management should keep this in mind.

#### *Prenatally*

Research demonstrates that maternal depression has negative effects as early as the neonatal period (Field, 1998). Consequently the requirement for early interventions is evident to prevent short-term and long-term sequelae. The first step to prevention is early detection of those at risk for depression and more specifically postnatal depression. Prenatal screening by gynaecologists, obstetricians, family doctors, and mental health professionals is paramount. Psycho-education for women and their families about the signs, symptoms of depression and the possible implications for their child are important.

#### *Infancy*

Massage therapy has been shown to be an effective treatment for the infants of depressed mothers. Field and colleagues (1996) compared massage and a rocking control group in one- to three-month old infants born to depressed adolescent mothers who were low of socio-economic status and single parents. Results indicated that infants who were assigned to the massage group were more alert and active during the massage, they cried less and characteristically had less physiological stress during the massage as shown by lower salivary cortisol levels compared to the infants in the rocking group. Infants in the massage group also gained weight, were more easily soothed, more emotionally stable, and had improved sociability.

Evidence has shown that infants of depressed mothers show a generalized depressed mood state with non-depressed adults (Martinez *et al.*, 1996). However, introducing infants of depressed mothers to non-depressed teachers who were familiar (the infant's teacher and primary caregiver) improved the infant's interactive behaviour (Pelaez-Nogueras *et al.*, 1995).

Gladstone & Beardslee (2002) report on Toddler-Parent Psychotherapy (TPP). The goal of treatment being the mother forming a secure relationship with the therapist which she will then draw upon to develop a secure attachment to her child. Their study assigned depressed mothers to TPP or no treatment; at follow-up fewer toddlers of depressed mothers in the TPP group were classified as insecurely attached compared to the control group.

#### *Adolescence*

Beardslee and colleagues (1997) examined the long-term effects of two preventative interventions



designed to increase family's knowledge of parental depression and to prevent depression in children. Thirty-six families who had a non-depressed child between the ages of eight and 15 and had a parent who had experienced an affective disorder were included and then randomly assigned to either a clinician-facilitated intervention or a lecture discussion group. Children in the clinician-facilitated condition gained a better understanding of their parent's illness and experienced higher levels of overall functioning as compared to the children in the lecture condition.

Group interventions programs have also been studied, with inconclusive results (Clarke *et al.*, 2001; 2002). A randomized control trial was conducted to ascertain the effectiveness in preventing depressive episodes in at risk children of adults treated for depression in a health maintenance organization (HMO). Children had sub-diagnostic depressive symptoms insufficient to meet full DSM-III-R criteria for mood disorder. The children were randomized to group cognitive therapy or usual care. The cognitive therapy group had a 9.3% cumulative incidence of major depression, compared to the 28.8% incidence rate in the usual care group. A similar study by Clarke's group, this time assessing the effectiveness of group cognitive behavioural therapy (CBT) for treating depressed adolescents, was conducted but the researchers were unable to detect any significant advantage of the CBT program over usual care. The efficacy of various psychotherapies (Michael & Crowley, 2002) and pharmacological treatments (particularly selective serotonin reuptake inhibitors) in the treatment of children and adolescents with depression has been demonstrated in previous research (Emslie *et al.*, 2001).

## Conclusion

Evidence has been provided on the deleterious effects of maternal depression, specifically on children and partners. In addition to the more acute effects, the impact and effects on families are enduring. Depression in women is common and therefore there is the potential for many children and partners to be affected. Families in which a mother is depressed should potentially be seen as families at risk, as family members are at risk of depression and other psychopathology. Some children are resilient and this should be borne in mind, and utilized in prevention and treatment programs. All health care professionals especially those involved in child care should be aware of the impact of maternal depression on children and have a low index of suspicion when deciding whether to investigate whether children are developing problems in physical or psychological domains. More research is needed to elucidate the exact mechanisms that confer risk of psychopathol-

ogy to children or partners, as this may give clues for intervention. Depressed women need to be educated about the potential of their illness to have long-term effects on their children and partners, not to make them feel guilty, but in order that they consider treatment early and consider a variety of treatment options that might indeed include their partners or children. Partners of depressed women often are left on the sidelines. They need to be included where appropriate, and the impact they have on children if they are themselves depressed needs clarification.

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