

**A PILOT STUDY OF SCREENING FOR  
POSTNATAL DEPRESSION IN BENGALI  
MOTHERS**

**MAJOR RESEARCH PROJECT  
Doctorate in Clinical Psychology  
University College London**

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## ABSTRACT

The Edinburgh Postnatal Depression Scale (EPDS), a 10-item self-rating scale designed to screen for postnatal depression, was developed for use with Bengali women. It was adapted using the back-translation method. The Bengali version of the EPDS was then validated against the General Health Questionnaire (GHQ). In order to investigate the effect of contextual differences, 22 postpartum Bengali women were recruited in Bangladesh, and 26 postpartum Bengali women were recruited in London. All subjects were between 8 weeks and 12 months postpartum. During pre-arranged home visits the participants were required to self-administer the EPDS and the GHQ, except in cases where there were literacy problems. In order to investigate the relationship between social support and postpartum distress, the researcher also administered a semi-structured interview to assess the extent of practical and emotional support available to the mothers. Both the qualitative and quantitative findings indicated that the EPDS, in its current form, has limited use as a self report questionnaire to screen for postnatal depression in Bengali women. The qualitative analysis also suggested that further modification of the scale is required to achieve greater scale equivalence. The results further indicated a significant relationship between social support and postpartum psychological distress. The effect of context on EPDS scores was not found to be statistically significant, although qualitative contextual differences were identified. Another single predictor of distress was found to be the mothers age; younger mothers were likely to have higher EPDS scores.

## ACKNOWLEDGEMENTS

There are a number of people whom I wish to thank for helping me complete this project.

Firstly, I wish to thank my family especially my parents for their endless patience, encouragement and emotional support.

Secondly, I would like to thank my research supervisors Lesley Glover and especially Peter Fuggle, for all his guidance, support, encouragement and patience throughout the duration of this project.

My thanks also go to my friends for all their kindness and moral support.

A special thanks is also due to my cousin Shahid for all his patience and help in adding the final, but essential, touches to this project.

I save my final thanks for my nephew Tahseen for brightening up many a dull moment.



**CHAPTER  
ONE:**

**INTRODUCTION**

## **INTRODUCTION**

### **1.1 Aims of the Study**

Postnatal depression (PND) is thought to affect at least 10-15% of mothers any time within the first year postpartum (Pitt, 1968; Cox et al., 1982; Kumar and Robson, 1984; Watson et al., 1984; Cooper et al., 1988). However, little is known about the prevalence of postnatal depression within the Asian communities in Britain. This is, at least, partly due to the clinical problem of screening. For both research purposes and in clinical practice a variety of measures have been used as tools for postnatal screening of English-speaking women of Western origin. However, the use of these measures, which are developed in English using Western subjects and norms, cannot be easily transferred to women from different cultures whose first language is not English.

The current study aims to assess the linguistic and cultural appropriateness of screening measures by adapting the Edinburgh Postnatal Depression Scale (EPDS; Cox, Holden, and Sagovsky, 1987) for use with Bengali women. More specifically, the first aim of this study is to develop a Bengali version of the EPDS. The acceptability of this translated version to Bengali mothers within the first year postpartum, both in Bangladesh and in London, will then be evaluated. The validity of the Bengali EPDS will also be assessed against the General Health Questionnaire (GHQ), a Bengali version of which has previously been found to be sensitive to this population. There will be further investigation of the results to assess whether similar rates of distress are identified in Bengali mothers using the EPDS as that identified in other samples.

The second major aim of the current study is to examine whether variations in women's EPDS scores are related to their social environment and support network, which will be investigated via a semi-structured interview.

## **1.2 Postnatal Depression**

It is first important to make the distinction between postnatal depression and the other disorders of affect associated with the postpartum period.

### **1.2.1 Puerperal psychosis**

Firstly, puerperal psychosis, a severe psychiatric disorder usually occurring within the first two to three weeks postpartum, is an uncommon postnatal illness with an incidence of one to two per thousand live births (Kendell, 1985; Kendell et al, 1987). It is characterised by psychotic symptoms such as delusions and hallucinations, the content of which tend to be related to the baby or birth experience, and in more severe cases, may include infanticidal thoughts or behaviours (Harding, 1989). Research has also indicated that this type of psychosis occurs across cultures. For example, in a study comparing Scottish women with Saudi Arabian women, the rate of onset, course of the illness and symptom presentation were found to be very similar (Rahim and Al-Sabiae, 1991). The primary risk factor in the development of puerperal psychosis is having a past history of psychotic illness (Marks et al, 1991). Further research findings have suggested that there is no causal relationship between puerperal psychosis and marital problems or social support (Dowlatshahi and Paykel, 1990); life-events (Marks et al, 1991); and stress (Brockington et al, 1990).

### 1.2.2 Postnatal 'blues'

Secondly, the most frequently occurring postnatal mood disorder affecting 50-80 % of women is known as the postnatal 'blues'. This common emotional state or mood disturbance is experienced during the first week postpartum, and usually subsides within 10 days (O'Hara et al, 1991). It is most probably triggered by hormonal and biological factors (Stein, 1982; Kennerley and Gath, 1986; Campbell, 1992), and is generally considered to be a normal postnatal reaction. Furthermore, the postnatal 'blues' do not appear to be associated with social, environmental or cultural factors, with consistent rates of prevalence across cultures (Kumar, 1994).

### 1.2.3 Postnatal depression

Thirdly, postnatal depression, the focus of the current study, is less common than the 'blues' affecting around 10-15% of mothers any time within the first year postpartum. Both quantitative (Whiffen and Gotlib, 1993) and qualitative studies (Beck, 1992; Mauthner, 1993) have shown that the nature of depression in the postpartum period is clinically similar to depression occurring at other times, including physiological, behavioural and cognitive symptoms. These include sleep and appetite disturbance, lack of energy, tension and anxiety, loss of libido, lack of affection, tearfulness, irritability, social avoidance, concentration difficulties, anhedonia, guilt and self-blame, suicidal thoughts. However, it is also known that the experience of childbirth increases the risk of depression three times, and 40% of postnatal depression is the first depressive episode experienced by women (Cox et al, 1993). Despite these facts, it was not until recently that mental disorders in the puerperium were given a specific diagnostic category in the International

Classification of Diseases (ICD-10; WHO, 1992). However, despite this inclusion, use of the category (F53) is not encouraged as it is accompanied by the recommendation that; 'This classification should be used only for mental disorders associated with the puerperium (commencing within 6 weeks of delivery) that do not meet the criteria for disorders classified elsewhere....' (ICD-10; WHO, 1992)

#### 1.2.4 Factors contributing to postnatal depression

Whilst prevalence rates for postnatal depression are also relatively consistent across Western cultures, unlike puerperal psychosis and the 'blues', postnatal depression is triggered primarily by psychosocial variables (Kumar, 1994). Research suggests that postnatal depression is caused by a combination of variables including social, psychological, interpersonal and biological factors (Cox, 1986; O'Hara and Zekoski, 1988; Gotlib et al, 1989). Studies have found no significant evidence in favour of hormonal theories (Albright, 1993; Kumar, 1994). In fact, sociocultural theories are strengthened by the fact that research suggests that there is no physiological difference between women experiencing postnatal depression and those who are not (Harris, 1994). Other studies have found no association between changes in women's psychological presentation and physiological factors (Albright, 1993; Hopkins, Marcus and Campbell, 1984).

Further evidence suggesting that psychosocial factors are primarily responsible for causing postnatal depression can be found by examining time of onset and duration of illness, which may follow a period of normal adjustment and extend beyond the period of postpartum physiological change. Glover (1992) found that onset of postnatal depression occurs during the first two weeks postpartum in about half the cases, but can otherwise occur at any time during the first year postpartum. In a

follow-up study of women who had suffered from postnatal depression, high rates of depression were found to be present in the sample four and a half years later (Philipps and O'Hara, 1991). Furthermore, in another study, Cox, Murray and Chapman (1993) found that the same rates of depression were prevalent among mothers of toddlers and new mothers. They postulated that recovery from depression was difficult due to the significant psychosocial stresses associated with taking care of a toddler.

Specific factors, including previous depressive illness, low social support, life stresses and relationship difficulties, which have been known to be significant predictors of non-postpartum depression, have also been found to be strong predictors of postnatal depression (Whiffen, 1991, 1992).

Life stresses in the form of adverse life events, which have a known relationship with depression in general, have also been found to be similarly associated with postnatal depression. For example, Paykel et al (1980) found that depressed mothers on average had 3.5 life events with 1.8 of those being negative, while other mothers had a mean of 2 events with 0.6 being negative. They also found that the events were largely independent of pregnancy and three quarters of the depressed mothers had experienced at least one life event leading to a negative effect. In another study, O'Hara (1986) reported that depressed mothers had almost three times the number of stressful life events in the postnatal period than mothers not experiencing depression.

Links between postnatal depression and marital dissatisfaction, that was present antenatally, have been reported in a variety of studies. Kumar and Robson (1984) found that postnatally depressed women were more likely to report the existence of marital conflict and difficulties prior to the baby's birth, than non-depressed mothers.

Other studies have indicated that postnatally depressed women report lower levels of marital satisfaction (Watson et al, 1984; Whiffen, 1988; Gotlib et al, 1991). Also Boyce et al (1991) reported that in their sample a predictor of postnatal depression was women perceiving their partners as being over-controlling and uncaring.

Levels of practical and emotional support during pregnancy and in the postpartum period have also been found to have a significant effect on the development of postnatal depression. A number of studies have found that women who are postnatally depressed report having inadequate levels of practical and emotional support (e.g. Paykel et al, 1980; O'Hara et al, 1983; O'Hara, 1986). These studies investigated the amount of support provided by women's partners as they are perceived as the main provider of practical and emotional support. However, this perception may vary cross-culturally. In some cultures, in addition to the partner, the extended family support network plays a very significant role in the postpartum period. This will be discussed in greater detail later in this chapter.

#### 1.2.5 Longer term effects of postnatal depression

In recent years increasing attention has been given to the detrimental effects of postnatal depression on mothers, children and other family members. Cox (1989) suggested that the experience of postnatal depression may have considerable long-term effects on mothers and their relationships with partners and significant others. Furthermore, Murray et al (1991) reported that postnatally depressed women may be less responsive to their babies which may, in turn, have a negative effect on child development. For example, in one study the Bayley Scales were administered to two month old babies of depressed and non-depressed mothers, and it was found that the mental development scores of the babies of depressed mothers were significantly

lower than the other babies (Whiffen and Gotlib, 1989). Cogill et al (1986) found some evidence that 4-year-old children whose mothers had suffered postnatal depression exhibited poorer cognitive development than children whose mothers had not experienced postnatal depression. In a more recent study, the effect of postnatal depression on boys' intellectual development was examined (Sharp et al, 1995). The results of this study indicated that at three years and ten months, the scores on standardised tests of intellectual attainment of boys whose mothers had been depressed in the first year postpartum were about one standard deviation lower than the boys of mothers who had not been depressed. Other studies have looked at the effect of depression on patterns of mother-infant interaction, and attachment. In one study, Murray et al (1993) compared the speech of depressed and non-depressed mothers when talking to their two-month-old babies. They found that depressed mothers were less focused on their baby and exhibited more negative affect. In another study comparing depressed and non-depressed mothers of three-month-old babies, Field (1984) found that the babies of depressed mothers engaged in less vocalisation and exhibited more negative facial expressions and less positive ones. Similarly, Stein et al (1991) found that children of mothers who had experienced postnatal depression had attachment problems. In another study, Murray (1992) examined the infant-mother attachment patterns of eighteen-month-old babies using the Strange Situation test (Ainsworth, 1969). She found that only 37.5% of the babies of mothers who had experienced postpartum depression were securely attached, while 76% of the babies whose mothers had not suffered from postpartum depression were securely attached. Thus, in conclusion the above studies indicate that postnatal depression can have significant detrimental effects on the mother-infant attachment



and mother-infants interactions, which may have longer term effects on cognitive ability.

### **1.3 Culture and depression**

Cross-cultural studies of depression present a significant approach towards identifying the cultural differences and universals in the aetiology, experience and expression of depressive disorders. Numerous reviews of the cross-cultural literature on depression have concluded that many of the conceptions relating to depression may, in fact, be very ethnocentric (e.g. Pfeiffer, 1968; Milenkov, 1969; Sartorius, (1973); Marsella, 1981; Kleinman, 1982).

From a medical perspective depression is viewed as a psychiatric condition characterised by specific affective, cognitive, behavioural, and somatic symptoms. While this description is also similar to the general view of depression within Western cultures, it may not be an appropriate conception for non-Western cultures. Research has indicated that in many non-western cultures equivalent terms and concepts of depression do not exist (e.g. Nigerians – Leighton et al, 1963; Chinese – Tseng and Hsu, 1969; Canadian Eskimos – Terminsen and Ryan, 1970; Japanese – Tanaka-Matsumi and Marsella, 1976). Krause (1989) examined the meaning of 'sinking heart' as an expression of distress within the Punjabi community in Bedford. In comparing this Punjabi model with Western concepts of stress and depression, and medical models of heart distress, she found that the 'sinking heart' model does not equate with any of the Western notions. However, the fact that conceptually equivalent terms cannot be found in a particular culture does not mean depression does not exist. It more likely indicates that the experience, behavioural presentation and social response to the disorder are variable across cultures.

### 1.3.1 Epidemiology and expression of depression across cultures

While early research indicated that depression may be less common in non-Western countries, recent research findings suggest otherwise. It has been found that in some African countries, depression is in fact relatively common (e.g. Benin – Bertschy et al, 1992; Lesotho – Hollifield et al, 1990; Odejide et al, 1989). However, variations have been found in the characteristic features of depression across cultures. Singer (1984), for example, found that while in Ghana there is a high rate of self-accusations of witchcraft, in Nigeria presentation is primarily somatic. Also in Nigeria, Leighton et al (1963) found that the Yoruba people had no word for depression and that the concept of depression as a disorder was not recognised. However, the symptoms characteristic of depression in the West were present except for feelings of guilt and self-blame. In reviewing the literature on depression in Africa, Odejide et al (1989) further found that the most predominant features of the disorder were hypochondriasis, feelings of sadness, and somatisation. They also report that the somatic symptoms are different from those reported in the West (e.g. heat, crawling, peppery sensations), and the African patients with somatic presentations appear not to respond to medications, indicating that perhaps the depression observed in Africa is qualitatively different from the Western conception of depression.

Several epidemiological studies conducted in India found a prevalence rate of depression in the community of 0.15% to 6% (Sethi, 1986). These studies also indicated that depression is more prevalent in northern and eastern areas of the country, and also more common in urban environments (Sethi, 1986). With respect to presentation, common characteristics were found to be somatisation, agitation,

suicidal notions and attempts (with infrequent completions). Also in India, in a systematic study of symptom presentation in a sample of depressed out-patients, using the cross-culturally standardised WHO-SADD interview (Jablensky et al, 1986), Gupta et al (1991) reported similar findings.

Epidemiological work in Japan, Korea and China has also reported prevalence rates that are lower than Western rates of prevalence (Nakane et al, 1988). The same researchers attempted to identify differences in symptom presentation of Japanese, Korean and Chinese depressives, and found that the Korean patients presented with the greatest levels of depressive symptomatology as measured by the Hamilton Rating Scale for Depression (HRSD – Hamilton, 1960). The researchers also observed numerous differences in relation to the nature of symptoms presented, but were unable to ascertain the extent to which the differences were due to psychiatrist, patient or cultural factors.

The final studies to be mentioned here are two large scale international surveys designed to identify cultural differences in depressive symptomatology. The first was conducted by Murphy et al (1964), and investigated symptom presentation in thirty countries. In twenty-one countries, similarities of expression were found in four core areas: depressed mood, diurnal variation, insomnia, and loss of interest in the environment. However, these symptoms were not frequently observed in the nine other countries, which were mainly 'non-Western'. In these countries the expression of depression was primarily in the form of somatic problems such as tiredness, anorexia, weight loss, and loss of libido.

A more recent large scale, cross-cultural study comparing depressive symptomatology was the WHO Collaborative Study on Depression (Sartorius et al, 1980; Jablensky et al, 1981; WHO 1983). This study involved 573 patients from five

countries, including Canada, India, Iran, Japan, and Switzerland. Experienced clinicians interviewed all patients using the WHO Schedule for Standardised Assessment of Depressive Disorders (SADD), which was developed specifically for cross-cultural use. Although the results indicated similar patterns of depressive disorder in all countries, significant cultural differences were observed with respect to the frequencies of particular symptoms. For example, 70% of the Canadian sample expressed suicidal ideas, whereas only 40% of the Japanese did so; and while somatisation was observed in 57% of the Iranian sample, it was only present in 27% of the Canadian sample.

### 1.3.2 Cross-cultural assessment of depression

A variety of measures for assessing depression within Western cultures have been developed and widely used, including self-report scales, interview schedules and observational scales. Many of these have been adapted for use within cross-cultural contexts.

The Zung Self-Rating depression Scale (SDS; Zung, 1965) and the Beck Depression Inventory (BDI; Beck et al, 1961) are two of the most widely used self-report depression measures. The two scales have been translated into several languages and used for cross-cultural research (Steer et al, 1986; Zung, 1986). The SDS, which has been assessed as having reliability and validity as a measure of depression severity, has been translated into thirty languages with normative data obtained for normal and depressed subjects in numerous countries (e.g. Germany, Spain, India, Japan, Korea). Similarly, the BDI has proven reliability and validity as a measure of depression severity (Beck et al, 1988). It has been translated and used in numerous countries

including Spain (e.g. Comas-Diaz, 1981), India (Ajmany and Nandi, 1973) and Japan (Shinfuku, 1973). Symptom levels have been found to vary cross-culturally indicating that cultural norms need to be identified within each culture where the BDI is used (Steer et al, 1986).

The most extensively used clinician-administered scale is perhaps the Hamilton Rating Scale for Depression (HRSD; Hamilton, 1967). Such scales are particularly useful within contexts where individuals may be uncomfortable with self-report measures. This scale focuses primarily on the somatic symptoms of depression, which may partly account for its extensive cross-cultural use. The HRSD also has proven properties of reliability and validity (Hamilton, 1986) and has been translated and validated for use within numerous other countries, e.g. Spain (Lopez-Ibor et al, 1986), Japan (Takahashi, 1986), and Nigeria (Odejide, 1986).

As mentioned earlier, the Schedule for Standardised Assessment of Depressive Disorders (WHO-SADD; Jablensky et al, 1986) was developed specifically for use in cross-cultural contexts. It has been used in numerous cross-cultural settings, with comparable reliability data and systematic translations and back-translations ensuring semantic equivalence across different language versions.

### 1.3.3 Culture versus context

Cross-cultural research is often conducted on immigrant populations, which raises the issue of culture versus context. That is, to what extent are differences (or similarities) associated with actual cultural variations or contextual variations. An example of a study illustrating the significance of one's cultural context in addition to their cultural background was conducted by Kinzie et al (1973). This study investigated the prevalence of depression in Hawaiian university students of Asian

and Western origin. The results showed that, unlike the relatively low prevalence rates found in Asia, female Asian students were found to have significantly higher rates of depression than the Western students (Kinzie et al, 1973, cited in Cox and Holden, 1994).

The difference in the prevalence rates for psychiatric morbidity among Asian immigrants in the U.K. continues to be a controversial issue. Several studies have suggested that Asians experience significantly lower levels of psychological disturbance than the indigenous population (Cochrane, 1977; Cochrane and Bal, 1989), and have a lower rate of mental health admissions (Brewin, 1980; Cochrane and Stopes-Roe, 1979). A number of explanations have been put forward to account for these lower rates of psychological disturbance. These include, under-utilisation of services due to stigma linked to mental illness; the suggestion that Asian immigrants are psychologically more robust, thus less likely to suffer from psychological disturbance; and reduced levels of detection of psychological disorders by mental health professionals, due to cultural differences in the expression of distress.

Other studies in contrast, however, have found that rates of psychological disturbance in immigrants are similar to those of the indigenous population (Malzberg, 1969; Murray and Williams, 1986) or perhaps even higher (Hashmi, 1968; Bagley, 1972). Indeed, studies conducted in a number of countries have suggested that immigrants have a higher rate of mental illness when compared with either the population in their countries of origin or the indigenous population (Rack, 1982; Cochrane, 1990). It has been proposed that the social and personal pressures of belonging to an ethnic minority population are significant factors in explaining the higher incidence of mental illness (King et al, 1994).

Members of immigrant populations are often faced with extensive social and psychological adjustment problems. These include language difficulties, the development of a new support network, new social roles and cultural problems, racial prejudice and discrimination, adjusting to environmental deprivation, e.g. poor housing, over-crowding, high unemployment, low family incomes. Henderson and Byrne (1983) proposed that immigrants are more likely to experience mental breakdown in the absence of social support networks. More recently, Naran (1993) highlighted the conditions under which immigrant populations live as one of the most significant sources of stress. Also, Littlewood and Lipsedge (1981) suggested that the comparatively long period between migration and first psychiatric contact for immigrants indicates the importance of environmental factors in the aetiology of psychological disturbance. They further suggest that while there is no straightforward explanation for different rates of psychiatric morbidity among Asians, one significant factor is likely to be cultural differences in the expression of psychological distress, as discussed earlier.

#### **1.4 Culture and postnatal depression**

The issues highlighted in the previous section are equally applicable to the cross-cultural study of postnatal depression. In addition, there may be other more specific issues that need to be considered, e.g. cultural differences in postnatal practices. Although depression in the postpartum period has been recognised in numerous Western and non-Western cultures, actual systematic investigation of postnatal distress in non-Western cultures is sparse.

In a number of reviews examining the literature on the expression of postpartum distress across different cultures, psychiatrists and anthropologists have drawn different conclusions. While realising the importance of investigating cultural factors when considering the development of postnatal depression, psychiatrists have argued that it is not a Western culture-bound disorder. Bagedahl-Strindlund (1992), Cox (1988), and Jansson (1987) all argued that the available literature indicates that the prevalence of postnatal mental disorders is similar across cultures, and differences in symptomatology are essentially the same as those generally found with respect to other mental disorders.

In contrast, the argument from the anthropological perspective is that postpartum depression *may* in fact be a culture-specific illness prevalent in Western cultures only (Harkness, 1987; Stern and Kruckman, 1983). According to the anthropological viewpoint, the significant cultural differences in the expression and frequency of postpartum depression clearly suggest that the development of the disorder has a social causation rather than a biological or psychological one. In a review of postnatal patterns of behaviour in non-Western cultures, Stern and Kruckman (1983) identified six common factors relating to the social structuring of the postnatal period. These elements are:

- 1) *cultural patterning of a distinct postpartum period*
- 2) *protective measures designed to reflect the vulnerability of the new mother*
- 3) *social seclusion*
- 4) *mandated rest*
- 5) *assistance in tasks from relatives and/or midwife*
- 6) *social recognition of new social status*



Stern and Kruckman (1983) further proposed that a lack of similar practices in the US (and possibly other Western cultures), particularly socially structured postpartum rituals, practical support for the new mother, and social acknowledgement of the new mothers' role transition, may be an important factor in the aetiology of postnatal depression.

In an anthropological investigation of the Kipsigis people of Kenya, through discussions with key informants, Harkness (1987) found no evidence of depression in the postpartum period. She further observed that practices relating to childbirth remained very traditional, whilst modern elements had been incorporated into some other aspects of the Kipsigis village life.

A number of other anthropological studies in non-Western cultures have also reported similar findings. In a study conducted in Nigeria, Kelly (1967) concluded that the lack of postpartum depression in the Ibibio people was due to their postpartum practices. One such practice involved the mother and baby being cared for by the woman's mother for several months, in a special hut known as a 'fattening room'. Also, Pillsbury (1978) found little evidence of postpartum depression in China. By studying the postpartum period, known as 'doing the month', he found that a great deal of attention, more than is given to the baby, is given to the new mother during the first postpartum month. He suggested that the development of postnatal depression in Chinese mothers was prevented by this supportive practice.

Similar such postpartum practices, e.g. going to one's parents for the first month postpartum, are also present in Japanese culture (Shimizu and Kaplan, 1987). In one study conducted in Japan, where an adjective checklist was used to detect extent of sadness, responses of women in the postpartum period were found to be similar to the non-postpartum controls (Murai et al, 1978, cited in Cox and Holden, 1994)). On

the basis of this finding, the researchers somewhat simplistically suggested that postpartum depression is not prevalent in Japan. In another study, Shimuzu and Kaplan (1987) used Pitt's (1968) postpartum depression scale to compare 29 Japanese women with 21 American women within the four to six week postpartum period. The measures were translated and back-translated, and the researchers hypothesised that there would be less postpartum distress and less social isolation in the Japanese sample than in the American sample. The results, however, indicated no difference between the two samples in relation to postpartum distress or isolation. It should be noted, however, that the findings might be attributable to the small sample sizes in this study.

Perhaps one of the first systematic, empirical studies designed to assess postpartum depressive symptomatology in non-Western cultures was a comparative study of semi-rural Ugandan women and Scottish women conducted by Cox (1979, 1983). Using ICD-8 criteria for depression, Cox reported a 10% prevalence rate of depression in the postpartum period in his Ugandan sample, and 13% in the Scottish sample. Both rates were within the expected range i.e. 10-15% that had been found through much previous research. Cox (1982, 1983) thus argued that despite the fact that the two cultures were very different, the rates of depression within the postpartum period were quite similar. However, Cox (1983) further suggested that the slightly lower rate found within the Ugandan group could perhaps be attributable to the fact that family networks were more supportive and there was a more structured postpartum period than that experienced by the Scottish women.

In another study conducted in Nigeria, Jinadu and Daramola (1990) investigated postpartum depression in a sample of 348 Yoruba women. The researchers were not aiming to diagnose depression but were investigating the form and extent of

psychological complaints during pregnancy and the postpartum period. Using a measure of psychological complaints developed by themselves, they found that symptoms were significantly more prevalent during pregnancy than in the postpartum period. While the authors suggested that the rate of distress found was less than Western rates, the use of measures not comparable with those used in Western studies makes empirical cross-cultural comparison difficult.

In a more recent study of postnatal emotional disorders in Nigerian women, English and Yoruba versions of the GHQ were used, in addition to a demographic and obstetric questionnaire and a semi-structured interview (Aderibigbe, Gureje and Omigbodun, 1993). Using these measures, the authors found a postpartum depression prevalence rate of 14% which is similar to that observed in Western studies. They further concluded that:

‘It seems that non-psychotic depressive disorders and anxiety-related disorders, irrespective of when (i.e. prenatal or postnatal) and in which cultural setting they occur, are mostly precipitated by psychosocial factors.’ (p.649, Aderibigbe et al, 1993).

Another cross-cultural study of postnatal distress was conducted in Britain, comparing English speaking and non-English speaking immigrant populations with the indigenous population (Watson and Evans, 1986). English and Bengali versions of the GHQ were used in addition to interviewer judgement and self-judgement. The authors reported finding similar rates of depression in all three groups. However, agreement between measures ranged from poor to good, making it difficult to ascertain the extent to which language and cultural background influenced the outcome.

#### 1.4.1 Culture versus context

The above cross-cultural study investigating postpartum depression in immigrant samples again raises the issue of culture versus context. For example, with respect to the Bengali group, the extent to which the results are effected by actual cultural variables or contextual variables is not known. In the absence of information relating to the prevalence of depression in the postnatal period in Women in Bangladesh, the possible effect of context cannot be assessed.

Furthermore, the anthropological findings relating to differences in postnatal practices discussed earlier, may have significant implications for non-Western ethnic minorities, such as Bangladeshis living in Britain. On the one hand, these women may have access to a more structured medical environment, while on the other hand they may be experiencing a loss in sociocultural protectiveness, social isolation, and communication difficulties.

#### 1.5 Problems of screening for PND

Prior to the development of the Edinburgh Postnatal Depression Scale (EPDS; Cox et al, 1987) there were no screening measures designed specifically for detecting depression in the postpartum period. Research into PND was conducted using existing self-report measures designed to screen for depression. However, when used with postnatal mothers, these non-specific depression measures have been found to have limited levels of accuracy in identifying depressed mothers.

Cox, Connor and Kendell (1982) conducted a study in Edinburgh to ascertain the frequency of PND and try to identify any links between PND and postnatal 'blues', psychosocial and obstetric variables. In this study, they used the Anxiety and

Depression Self-report Scale (SAD; Bedford and Foulds, 1978) and found the measure to have questionable validity when used with pregnant women. When interviewed, it was found that of the 13 women who obtained clinically significant scores on the SAD, 6 women had no mental illness, 4 exhibited only minor symptoms, and only 3 women had some type of psychiatric disorder. In another study where the Beck Depression Inventory (BDI; Beck et al, 1961) was used as a postpartum screening measure, 23 women obtained scores that were not clinically significant and 19 women scored in the clinically significant range (O'Hara et al, 1983). However, of the 23 women, 4 were actually found to meet the Research Diagnostic Criteria (RDC; Spitzer et al, 1978) for depression, and of the 19 women whose BDI scores were clinically significant, only 11 actually met the RDC for depression. Nott and Cutts (1982) investigated the possibility of using the 30-item General Health Questionnaire (GHQ; Goldberg et al, 1970) in the postpartum period, and found that of the 45% who obtained clinically significant scores on the measure, only 18% were actually assessed as having a psychiatric problem.

In all of the above studies there was a high proportion of false positives. That is, using these measures, many women were being wrongly identified as being depressed. This suggests that perhaps in order to use these measures with this population, the threshold scores for clinical significance need to be altered to a level that is more appropriate for postpartum women. It is likely that one of the reasons why pregnant and postpartum women score highly is that many of the items in these measures relate to the somatic symptoms associated with depressive disorders (Cox et al, 1987). The difficulty with this is that the natural physiological changes that occur during pregnancy and the postpartum period may contribute considerably to an increase in somatic symptomatology, e.g. tiredness, thus resulting in misleading

scores. A further problem with these measures not designed specifically for use with postpartum women is that some of the items are not appropriate for women with young babies. These include items relating to changes in sleeping patterns and social participation. A woman with a young baby is likely to respond very differently to such items than a woman without, regardless of any psychological distress.

#### 1.5.1 Cross-cultural screening for PND – a specific example

While the GHQ, a measure designed to screen for psychological disturbance, was developed within a Western cultural context, it has been widely used cross-culturally (e.g. Mari and Williams, 1985; Aderibigbe and Gureje, 1992; Aderibigbe et al, 1993). Indeed, Goldberg and Williams (1988) reported that at least fifty studies validating the GHQ have been published and the measure has been translated into about thirty-eight languages.

As mentioned earlier, Watson and Evans (1986) used the 30 item GHQ in a study comparing three culturally differing groups of postnatal women. The three groups were women from the indigenous population, English speaking immigrants from differing races and non-English speaking Bengali immigrants. In order to assess whether or not the women were depressed, three methods were used; the GHQ, interviewer rating, and a self-assessment by the mothers themselves. The GHQ was translated into Bengali for the Bengali subjects, and in cases where the mothers were unable to read the questionnaire, the interpreter read it to them. The authors reported that there was good agreement between the translated version and the English GHQ. They further stated, however, that 'there were certain linguistic and semantic problems above conceptualising feelings' (p.869, Watson and Evans, 1986). In addition to this, as with other measures of psychological distress, the GHQ was

found to contain some items that lacked face validity for postnatal women, e.g. 'Have you recently been having restless disturbed nights?' As such items may result in higher numbers of false positives in this population, following consultation with a professor of psychiatry, the authors decided to shift the threshold score from 4/5 to 8. Each woman was interviewed three times, at 8 weeks, 8 months and 14 months postpartum.

The results of the study indicated comparable rates of depression in the three groups of postnatal women. However, there were widely varying rates of agreement between the three measures. Overall, agreement between the mothers' GHQ scores and interviewer judgement of the mothers' level of distress seemed to be better than the agreement between GHQ score and self-assessment or interviewer judgement and self-assessment. The 'tentative conclusion' drawn by the authors was that since the correlation between measures was not vastly different when comparing indigenous and immigrant mothers, using an objective measure such as the GHQ 'it is possible to compare symptoms of distress across cultures' (p.874, Watson and Evans, 1986).

The authors of this study, however did not comment on the acceptability of the Bengali version of the scale to the mothers. They did note that all of the Bengali sample were women who originated from Sylhet, the district in Bangladesh from where most of the Bengali population in London originates. People from this district generally speak Sylheti, a *spoken* dialect of the Bengali language. It is possible that mothers with a limited education in Bengali who are accustomed to speaking only in Sylheti, may have difficulty in understanding a scale written in Bengali, depending on the complexity of the expressions used. As such, when translating scales, it is important to use terms and language that is as close to everyday spoken expression as possible.

### 1.5.2 Edinburgh Postnatal Depression Scale (EPDS)

To address the need for a specific measure, Cox, Holden and Sagovsky developed the 10-item, self-report EPDS. Prior to its development, they stated that:

‘To be useful as a screening test for depression following childbirth, a self-report scale must be fully acceptable to women who may not regard themselves as unwell, or as in need of medical help. The scale needs also to be simple to complete, and not require the health worker to have any specialist knowledge of psychiatry.’ (p783, Cox et al, 1987.)

The authors initially developed a 13-item version of the scale by selecting depression items that were thought to be appropriate for postpartum women from existing measures. These measures included the Beck Depression Inventory (BDI; Beck et al, 1961), the Anxiety and Depression Self-report Scale (SAD; Bedford and Foulds, 1978) and the Hospital Anxiety Depression Scale (HAD; Zigmund and Snaith, 1983). Somatic items that may not be suitable for detecting depression in postpartum women were excluded, as were items lacking in face validity for this population. For example, the HAD item designed to detect anhedonia, ‘I have enjoyed reading a book or watching television’ seemed inappropriate as it does not account for the increased demands on the time of new mothers. The selected items were tested for user acceptability by interviewing 100 women.

The 13-item scale was validated on a community sample in Scotland, against the Research Diagnostic Criteria (Spitzer et al, 1978). Its recognition of depressed and non-depressed women was found to be satisfactory. However, further analyses indicated that a shorter 10-item scale would in fact be equally effective in its ability



to screen for depression. The 10-item scale was also validated in Scotland in a similar way to the first validation study. In this study most of the women scoring above the threshold score of 12/13 were distinguished correctly. The scale was found to have 86% sensitivity and 78% specificity. The results further indicated that by using a lower threshold score of 9/10, a less than 10% failure rate for case identification could be achieved. The authors, thus, suggested that during the initial stage of screening in a community sample, the 9/10 threshold score should be used.

The validation study also indicated that both postnatal women and the health visitors found the EPDS to be an acceptable measure. A number of subsequent studies using the EPDS have also found the scale to be acceptable to postnatal women (e.g. Holden et al, 1989; Cullinan, 1991; Gerrard et al, 1993). Further examination of the validation study results, revealed that three of the women with false negative scores and the three women who had obtained the highest EPDS scores, had been interviewed in the presence of other family members. In view of these observations the authors suggested that perhaps postnatal women tend to either minimise or exaggerate the presence of any psychological problems in the presence of others. They, thus, recommend that other family members should not be present during administration of the EPDS.

### 1.5.3 Cross-cultural use of the EPDS

Since the EPDS has been found to be a reliable and valid screening tool for postnatal depression in British women (Cox et al, 1987; Harris et al, 1989; Murray and Carothers, 1990), it is being increasingly used as a postnatal depression research tool in other English and non-English speaking countries. These include the United States, Australia, Iceland, Sweden, and the Netherlands. In a validation study in

America (O'Hara, 1991) 193 women were screened using the EPDS and the Inventory to Diagnose Depression (IDD; Zimmerman et al, 1986) at around one month postpartum. The average age of the mothers was about 29 years, all were married and about 37% of the sample were first time mothers. The mean EPDS score of the sample was found to be 6.93 (s.d.=4.55), with 11.9 % of mothers scoring above the 12/13 cut-off. The correlation between the EPDS and IDD in relation to case identification was significant with 89% agreement. A further diagnostic interview was conducted on 36 women out of the whole sample to distinguish between minor and major depression. The results indicated 86% agreement between the EPDS and diagnostic interview, with the EPDS exhibiting 72% sensitivity and 100% specificity. Thus, this study provides evidence that the EPDS is a reliable and valid screening tool for a U.S. sample.

Boyce et al (1991) conducted a similar study in Australia on 98 women who were within six months postpartum using the EPDS and Diagnostic Interview Schedule (Robins et al, 1981). The results were similar to the above study with a 96% agreement between the measures. In another study Boyce (1991) administered the EPDS and Beck Depression Inventory (BDI; Beck et al, 1961) to 161 women on three occasions, at 1,3 and 6 months postpartum. Again similar results were obtained in terms of case identification, with agreement between the two measures ranging from 91% to 96% over the three assessments.

In the above studies the EPDS required no adaptation as it was used in English speaking, Western cultures. However validation studies have also been conducted on some translated versions of the EPDS. Lundh and Gyllang (1993, cited in Cox and Holden, 1994) translated the EPDS into Swedish. The process of validation involved administering the translated EPDS to 53 mothers who were also rated using the

Comprehensive Psychopathological Rating Scale, a scale both often used in Sweden and in cross-cultural research (Perris, 1986). While statistical correlation between the two measures was not reported by the authors, graphical presentation of the results indicated a 'reasonable' level of agreement (O'Hara, 1994).

The EPDS was also translated into Icelandic for a study involving 200 women across three health centres in Iceland (Thome, 1991, cited in Cox and Holden, 1994), although not validated against another assessment. In this study the author reported that some items in the EPDS had presented difficulties in translation, and after back translation, further changes were made to the Icelandic version by the author. Mothers in this study were administered the EPDS between 7-8 weeks postpartum, and those with a score equal to or greater than 9 were again screened with the EPDS at three months and six months postpartum. The author reported that the Icelandic version was found to be reliable ( $\alpha = 0.80$ ).

The final study to be examined is the validation of the Dutch version of the EPDS (Pop et al, 1992). As with the other studies the EPDS was translated and back translated, but the authors reported that there were no significant differences between the English and Dutch versions. In this study 303 women were administered the Dutch EPDS along with a number of other measures previously validated on the Dutch population (e.g. the BDI, the Symptom Checklist 90 depression sub-scale). The mean EPDS score for the sample of was found to be 5.89 (s.d.=4.03), and a significant correlation was found between the EPDS and the other depression measures. It was further reported that the respondents experienced no difficulty in completing the measure, and the authors found the EPDS to be a very good self-report screening tool for postpartum depression.

#### 1.5.4 Using the EPDS in non-Western cultures

As described in the previous section, the use of the EPDS has been examined in a number of Western cultures other than the UK. While it has also been translated into a number of Asian languages including Hindi, Urdu, Punjabi and Japanese, there does not appear to be any literature reporting its validation or use in non-Western countries. This is not entirely surprising, considering the issues concerning cross-cultural expression of distress and assessment of depressive disorders. In view of these issues, it is obviously not sufficient simply to translate the EPDS and proceed to use it in non-Western cultures and countries. Rather, following translation, careful consideration and investigation is required to ascertain the appropriateness of the scale within a non-Western culture.

As the first stage of a measure development project, the Punjabi version of the EPDS was translated in the UK and piloted on a small sample of Punjabi mothers in Wolverhampton (Clifford, Day and Cox, 1997). The purpose of the pilot study, which was a part of the measure development process, was to test for content and semantic equivalence of the Punjabi version of the EPDS. The small sample consisted of 15 mothers who were bilingual in Punjabi and English. Each subject completed an original version of the EPDS and a Punjabi version. The researchers found the two sets of responses to have a high degree of comparability and concluded that 'the Punjabi version of the EPDS scale was 'as near as possible' to the English scale in terms of content and semantic equivalence' (p.619, Clifford et al, 1997). The validation study of the Punjabi version of the EPDS has not yet been reported.

## **1.6 Developing measures for cross-cultural use**

In order to assess whether a measure is both clinically and empirically robust across cultures and can be appropriately used for cross-cultural measurement, it must first be carefully adapted for use in the cultures to be studied.

### **1.6.1 Methodological issues**

There are a number of methodological issues that need to be considered when using measures for cross-cultural research. As described earlier in this chapter, there has been and continues to be much cross-cultural research on depression. However, much of this work has been based on the assumption that mental illness in non-Western cultures can be characterised using diagnostic systems and categories derived from Western definitions of psychological distress. Advocates of the 'new cross-cultural psychiatry' (Leff, 1990; Littlewood, 1990) would argue that the cultural context within which mental disorders develop needs to be given greater attention. Littlewood (1990) argues that in order to establish the existence, cultural definition and cultural significance of a mental disorder, it needs to be carefully studied from within a culture. For example, a major issue of using depression measures derived in the West for cross-cultural research is that the meaning of symptoms and behaviours may vary considerably across cultures, and behaviours or symptoms identified as abnormal in one culture may not be in another.

### **1.6.2 Translation**

When developing rating scales or self-report measures for cross-cultural use, careful consideration needs to be given to the translation of measures, conceptual

equivalence of individual items, and scale equivalence (Marsella, 1987). One method of adapting measures for cross-cultural research purposes is that of 'back translation' and 'decentering' (Brislin, 1970; Werner and Campbell, 1970; Marsella, 1987). Back translation involves a bilingual translating the measure from the original language into the required language, followed by a second bilingual translating the measure back into the original language. The aim of this process is not literal translation with as little change to language form as possible, but to produce material that sounds sensible and natural in both languages, a process called decentering. Material modified in this way is more appropriate for cross-cultural use than literally translated material that does not take into account cultural meaning and appropriateness of language being used.

More recently, Flaherty et al (1988) have suggested a comprehensive framework for developing measures for cross-cultural use. Their framework provides useful guidelines for development and validation of measures, taking into account five major aspects of equivalence, which will be outlined below. This framework was used in the development of the Punjabi EPDS (Clifford, Day and Cox, 1997), and aspects of the model will be drawn on in the current study.

### 1.6.3 The five stage approach

Flaherty et al (1988) proposed that five types of equivalence need to be considered when developing a measure designed and validated in one culture to be used in a different culture:

#### *1) Content Equivalence*

'The content of each item of the instrument is relevant to the phenomena of each culture being studied.' In order to achieve this, each item in the measure needs to be

carefully examined to establish whether the behaviour or symptom described in the item is relevant or applicable to the culture being studied.

2) *Semantic equivalence*

'The meaning of each item is the same in each culture after translation into the language and idiom (written or oral) of each culture.' This can be best achieved by using the back-translation method described earlier. When the translated versions are then compared, items that are consistently judged as having different meanings in both languages, perhaps need to be excluded from the measure. However, items judged as being similar can often be reworded to achieve greater semantic equivalence.

3) *Technical equivalence*

'The method of assessment (e.g., pencil and paper, interview) is comparable in each culture with respect to the data that it yields.' This refers to whether the way in which data is collected has different effects on the results of the cultures being studied. For example, in some countries paper and pencil tests are rarely, if ever, used and would thus constitute an unfamiliar method of data collection, which may effect the results obtained. In order to achieve technical equivalence, researchers need to consider carefully the appropriateness of the data collection method for each of the cultures being studied.

4) *Criterion equivalence*

'The interpretation of the measurement of the variable remains the same when compared with the norm for each culture studied.' This refers to the capacity of a measure to assess the variable in question, e.g. postnatal depression, in both cultures such that the results obtained from the measure can be interpreted in the same way for both cultures. In some instances a measure may be able to distinguish between

the presence or absence of a phenomena, but assessment of the norms and distribution of scores within a particular culture may indicate that the cut-off score needs to be altered for correct identification of cases within that culture. In other instances the independent diagnostic criteria upon which a measure is based may be found to be inappropriate for use with a different culture. The main issue for criterion equivalence, thus, is not the occurrence of symptoms, but the cultural meaning and relevance of the symptoms.

#### *5) Conceptual equivalence*

'The instrument is measuring the same theoretical construct in each culture.'

Conceptual equivalence is usually examined by assessing the relationship between constructs assessed by the measure being developed, and then comparing this relationship with the previously known relationship between the constructs. For example, if social support is known to be negatively correlated to depression in one culture, and the same relationship is found between the two variables in a second culture using culturally adapted measures for social support and depression, then the two measures may be considered to have conceptual equivalence.

When adapting measures for cross-cultural use, it is unlikely that a culture-free measure i.e. one which exhibits exact equivalence on all five dimensions, will be produced. However, such a framework 'represents an ideal standard for instrument development' (p.262, Flaherty et al., 1988) that cross-cultural investigators can aim to best achieve.



The above criteria will be considered during the course of the current study in relation to the development of the EPDS for use within the Bengali culture, its administration to subjects and the results obtained.

### **1.7 Relationship between PND and social support**

Research has consistently identified social support as a significant contributing factor in the aetiology of postnatal depression. Studies conducted in Australia, Belgium and Canada found that postnatal depression was associated with mothers' perceptions of the adequacy or appropriateness of the support received (Boyce et al, 1991; Demyttenaere et al, 1995; Gottlieb and Mendelson, 1995). Numerous other studies have found a relationship between postnatal depression and inadequate social support, particularly support provided by the partner both during pregnancy and in the postpartum period (e.g. Collins et al, 1993; O'Hara, 1986; O'Hara et al, 1983; Paykel et al, 1980). Also, it can perhaps be argued that the higher incidence of postpartum depression found in women without partners (Hobfoll et al, 1995; Webster et al, 1994) is partly due to low levels of social support.

Several of the above studies have included the two aspects of social support – practical support and emotional support in their investigations (e.g. O'Hara et al, 1983; O'Hara, 1986) and found that the quantity and quality of both can have an effect on the development of postnatal depression. Two studies conducted in America further found that practical support was perceived as being more important than emotional support in the maintenance of psychological well-being. One of these

studies investigated mothers' with low-incomes (Collins et al, 1993) and the other involved couples expecting their second child (Jordan, 1989).

Brown (1992) proposed that depression after a 'severe event' could perhaps be prevented in vulnerable women if the partner or friend provides 'crisis support'. He suggested that this support should include the presence of someone close to allow the mother to talk about the severe event (i.e. the birth); continuing support provided by that person; and the support provider avoiding making any negative comments to the mother during the time when support is being given. In a study looking at vulnerable women, Brown (1992) found that 26% of women who had not received this type of crisis support became depressed, while only 4% of those who had expected and received support became depressed. He further found that the women least likely to become depressed were those who rather than expecting or receiving support from their partner had received support from another close confidante; and those most likely to suffer depression were women who did not receive the support they had expected.

As mentioned earlier in this chapter, it has further been argued by anthropological researchers that the prevalence of postpartum depression may be much less in non-Western cultures partly due to the provision of structured support in the postpartum period (Stern and Kruckman, 1983).

### **1.8 Research questions**

This study aims to address some of the issues raised in this review of the literature by developing a Bengali version of the EPDS and administering to Bengali women living in two different context.

The main research questions are:

- 1) To what extent is a Bengali version of the EPDS a reliable and valid tool for use with postpartum Bengali women.
  
- 2) Do levels of postpartum psychological distress, as measured by the Bengali version of the EPDS, in a sample of Bengali women in Bangladesh differ from those of a sample of Bengali women in London.
  
- 3) Do women with lower levels of social support obtain higher scores on the EPDS.

**CHAPTER  
TWO:**

**METHODS**

## **METHODS**

### **2.1 Design**

The design of this study involved three distinct aspects. The first was to develop a Bengali version of the measure using the back-translation process. The second involved validation of the EPDS, both quantitatively and qualitatively. The quantitative validation involved administering Bengali versions of the EPDS and GHQ to subjects recruited in Bangladesh and in London. The EPDS scores and GHQ scores for the whole sample of subjects were then compared to assess the degree of correlation between the two measures. The qualitative validation involved a re-examination of the translated EPDS in view of subject response patterns, questions raised regarding EPDS items during administration, and general comments of subjects regarding the measure. The observed difficulties and discrepancies were assessed within a framework of content, semantic, technical, criterion and conceptual equivalence. The third aspect of the study was to examine the effect of several independent variables, including context (i.e. country of residence), practical support and emotional support, on EPDS scores. A semi-structured interview schedule was used to assess the extent of practical and emotional support available to the subjects. All three measures were administered to all subjects by the researcher who is fluent in English, Bengali and Sylheti.

#### **Recruitment plan**

This study was conducted partly in Dhaka, Bangladesh and partly in Camden, London. It was initially anticipated that a total of 60 Bengali women would be recruited for this study: 30 in Bangladesh and 30 in Camden. The anticipated sample size for Camden was determined by the size of the Bengali population within the

borough. From a total population of 8,600 in Islington and Camden, there are 1700 women of child bearing age with an expected fertility rate of 134 births per annum. For the six-month period of this study, the total possible sample was 65. Therefore, it was realistically estimated that about 50% of the total possible sample might be recruited.

As there was no reason to assume that there would be a very large effect size, ideally a larger group of subjects would have given the study greater power. However, for practical reasons, this was not possible within the time available. Furthermore, a random selection of subjects was not achieved. The two samples recruited were a sample of Bengali women in Camden and a sample of Bengali women in Dhaka who could afford private ultrasound scanning.

The initial selection criteria were that participants should be Bengali mothers who are at least 18 years old and within the 10 weeks to 6 months postpartum period. Although Cox et al (1987) had originally suggested that the EPDS could first be given at around six weeks, it was later found that not all depression would be detected at this stage as onset of symptoms could occur at any time during the postnatal months. The rationale for selecting mothers within the 10 weeks to 6 months postnatal period was that 50% of postnatal depression cases occur within the first three postpartum months, and 75% occur by six months postpartum (Cooper et al, 1988). However, it was further anticipated that in the time available it may not be possible to find the required number of participants that fit these criteria. It was, therefore, decided that if this were found to be the case, the postpartum period would be broadened to 12 months.

## **2.2 Participants**

The method of recruitment in Bangladesh had to be considered carefully as records of births are not routinely kept by clinics or hospitals, whether state run or private. After discussion with a number of doctors in Dhaka, it was decided that within the time available the best method of recruitment would be through a private ultrasound-scanning clinic, owned and run by a doctor previously known to the researcher. As the clinic does not routinely keep patient records, it was decided that the names, addresses and telephone numbers of expectant mothers would be kept during a specific time period. As the researcher had planned to conduct the interviews in Dhaka during December 1997, and the subjects were required to be at least 10 weeks postpartum, it was decided that the clinic should keep records of women whose expected delivery date was around mid to late September 1997. The details were to be taken from women who had come to the clinic for their last scan prior to delivery. Although a broad range of women, with respect to social background and economic status, are seen at the clinic, participant selection at this stage was somewhat biased. This was due to the fact that the clinic doctor excluded women from selection if she felt they would be inaccessible to the researcher due to distance or difficult to locate addresses. In some overcrowded areas in Dhaka, it is extremely difficult to locate addresses as roads may not be named or numbered in any organised way, and in some instances the roads may not be easily accessible by car. Of particular concern to the doctor was the safety of the female researcher while conducting this research. Before asking women to give their names and addresses, the doctor explained that a research project was being conducted in Dhaka and London on women in the postpartum period, and asked whether it would be alright for a researcher to contact them in relation to this. The details of 40 women, who consented to this, were taken.

Of these 40 women, 11 did not have telephone numbers and thus could not be contacted; and the researcher was unable to reach 4 women as either the number was wrong or there was no response when called. Of the remaining 25 women, the researcher was unable to talk to three, as relatives reported that they were unwell. The final sample in Bangladesh consisted of 22 women who were between 8-12 weeks postpartum at the time of interview.

Recruitment of subjects in Camden was done in conjunction with 2 Camden health visitors. All Bengali women who had given birth within the last year were selected from these health visitors' birth lists. This selection totalled 42 women. However, for 5 of these, either telephone numbers were not available or had changed; for 4 there was no response when called; 3 had either just left for or were about to go to Bangladesh; 2 reported being too busy to be interviewed; and 2 women were not at home at the pre-arranged interview time. Thus, the final sample in Camden consisted of 26 women who were between 8 weeks-12 months postpartum at the time of interview.

### 2.3 Measures

Three measures were used in this study: 2 quantitative measures, the EPDS and GHQ (adapted versions); and a qualitative semi-structured interview.

#### 3.3.1 A Bengali version of the Edinburgh Postnatal Depression Scale (EPDS)

The original version of the EPDS (the reliability and validity of which has been detailed earlier) consists of ten items. Each item has four possible responses designed to assess the severity and duration of the symptom during the last seven days. Items are scored on a scale of 0-3, where absence of a symptom scores 0, and maximum



severity and duration scores 3. The total possible score ranges from 0 to 30. The authors recommend that the EPDS be self-administered except where there are literacy problems.

A Bengali version of the EPDS was developed for this study. This was done using the back-translation process described earlier. The researcher and three other bilinguals (two first generation, and two second generation) first translated the measure from English to Bengali. This involved a careful examination of each statement and then each word being used in order to assess whether the meaning of each item was the same in Bengali language and expression as the English version. In order to try and best achieve content and semantic equivalence, careful consideration was given to translating and interpreting the items into meaningful Bengali statements. This proved to be a very difficult and time-consuming exercise as some English words do not have equivalent Bengali versions, or even if they do, they are not words used in everyday Bengali language (e.g. anxious or panicky), and thus would be difficult to understand.

The translated version was then back-translated by another two bilinguals who were temporary residents in the U.K. taking professional exams. On the whole there appeared to be reasonable agreement between the back-translation and the original version. There were discrepancies, however, which will be considered in a qualitative analysis of the translation and back-translation that will be presented in the following chapter (see Appendix for the full translation and back-translation).

### 3.3.2 A Bengali version of the General Health Questionnaire (GHQ)

In the absence of any measures for detecting psychological distress that have been validated for use with the Bengali population, it was decided to use the GHQ as it

had previously been used with postpartum Bengali women in London. Although the GHQ has not been validated for use with this population, Watson and Evans (1986) found that the correlation between the Bengali mothers' GHQ scores and interviewers' ratings of the participants' distress ranged from fair to good over a number of interviews.

There are a number of different versions of the GHQ (Goldberg and Williams, 1988), each with a differing number of items ranging from the original 60-item version to a 12-item version. In this study, the 28-item GHQ was used. This has four sub-scales, each consisting of seven items: sub-scale A detects somatic symptoms; sub-scale B - anxiety/insomnia; sub-scale C - social dysfunction; and sub-scale D - depression. The scale has a combination of positive and negative items, and participants are required to rate their recent experience on a four-point scale. There are three possible scoring procedures. The first, which is recommended by the authors, consists of assigning a score of 0 or 1, i.e. 0-0-1-1, to each item simply to distinguish between the presence and absence of a symptom. Using this method, the authors suggest a threshold score of 4 or 5 for the identification of cases, from a total possible score of 28. The second scoring method assigns separate values to each response on the scale i.e. a Likert severity score, 0-1-2-3. The third scoring method, proposed by Goodchild and Duncan Jones (1985), uses a different scoring scale for positive items and negative items: positive items are scored on the 0-0-1-1 scale, and negative items are scored on a 0-1-1-1 scale. Thus, this method also assigns a score of one when participants respond with 'same as usual' on a negative item.

For this study, the GHQ was translated and back-translated in the same way as the EPDS. Overall, the agreement between the original and the back-translation appeared to be reasonably good.

### 3.3.3 Semi-structured Interview

The third measure was a semi-structured interview developed by the researcher. Past research literature suggests that the availability of support is a strong predictor of postnatal distress. The literature further highlights the importance of two aspects of support: practical and emotional. Thus, the main purpose of this interview was to obtain demographic information and assess the extent of practical and emotional support available to the participants. In addition to this, in cases where participants obtained clinically significant scores on the EPDS, some further questions were asked to elicit more detailed information regarding the distress experienced. As the first two measures were structured questionnaires, it was decided to keep the interview as informal as possible in order to allow the mothers the opportunity to feel relaxed and speak as openly as possible.

The interview was loosely based on the Arizona Social Support Interview Schedule (ASSIS: Barrera, 1980, 1981). This measure was designed to identify the providers of support, the extent of support and the satisfaction with support in a number of areas, e.g. private feelings, physical assistance, social participation. For the current study, it was decided to ask core questions regarding practical support ('physical assistance') in relation to the baby and household chores, and emotional support ('private feelings'). In addition to this, an open-ended question was asked about the presence of any other problems that may be affecting the way the mother is feeling.

The additional information sought from mothers scoring significantly on the EPDS included, onset and duration of current symptoms, thoughts/feelings associated with distress experienced, coping strategies, perceptions about why she is experiencing current feelings, thoughts about future and what might help to make things better.

The coding categories used for practical support were:

1 = no practical support reported (none)

2 = support with either baby *or* household chores reported (baby or chores)

3 = support with baby and chores reported (baby and chores)

The coding categories used for emotional support were:

1 = no confiding relationships (none)

2 = one confiding relationship identified

3 = more than one confiding relationship identified

## **2.4 Procedure**

### *Piloting Measures*

The measures were piloted on two postpartum mothers not included in the study. This allowed the researcher to gain some experience of conducting the interviews. Although the researcher is fluent in Bengali and Sylheti, she had little experience of conducting this type of interview in Bengali. The participants' comments regarding the semi-structured interview were used to make minor changes to the wording of items. One of the main findings of the pilot was the time taken to complete the questionnaires and the interview, allowing time for explanation of the study and any questions before or after the interview. It was found that at least one hour should be allocated for each participant.

### *Study procedure*

After discussion with a Bengali health advocate working with the health visitors, it was decided that it would be best to make the initial contact by telephone, during which the project was briefly explained. If women agreed to take part in the project, a convenient time was arranged for a home visit. Following this, written information

about the study and a contact name and number were sent to the subjects. The same procedure was followed for subjects in Dhaka.

During the home visits the project was again explained and the participants were given the opportunity to ask questions. The participants were then asked to complete the EPDS, followed by the GHQ. If they were unable to self-administer due to literacy problems, the researcher administered the questionnaires. While subjects completed these two measures, notes were taken of comments made or questions asked in relation to items in the measures. Following this, the semi-structured interview was conducted and the interviews were tape recorded with the consent of the participants. Each interview lasted between 45 and 75 minutes.

The EPDS and GHQ were scored and the interviews were coded straight from the tapes.

## **2.5 Plan of Analysis**

### **1) Demographics**

The demographic details of each group will first be analysed and compared using Chi-squared or t-tests.

### **2) Validation of the EPDS**

#### **a) *Quantitative***

Conducting a Pearson Item-total Correlation between scores on each item and the total score will assess the reliability (internal consistency) of the Bengali version of the EPDS.

A Pearson Correlation will also be conducted to assess the degree of relationship between the EPDS scores and the GHQ scores of the whole sample.

A chi-square test will also be conducted to assess the level of agreement between measures with regard to case identification.

*b) Qualitative*

The applicability and acceptability of the adapted EPDS to Bengali mothers will be assessed by considering issues raised by the participants with regard to the scale during administration.

3) Factors associated with EPDS scores

a) A 3-way ANOVA (3x3x2) will be carried out. The 3-way interaction between practical support, emotional support and context is not expected and therefore will not be tested in this model. Likewise, it is not expected that emotional support will interact with practical support, therefore this 2-way interaction will also not be tested.

The only interaction that will be tested is between practical support and country, and emotional support and country in order to test the basic hypotheses that the effect of emotional support and practical support are dependent on context.

b) Further multiple regression will be carried out to test the effect of a number of demographic variables on EPDS scores.

**CHAPTER  
THREE:**

**RESULTS**

## **RESULTS**

### **3.1 Demographic analysis of participants**

A variety of demographic data was obtained for all the participants, in addition to some extra information applicable to the London sample only.

#### **3.1.1 Demographic characteristics of both groups**

Details regarding mother's age, education level, first spoken language and husband's occupation for both groups are presented in Table 1. The scale of difference between the two groups in relation to mother's age and education was found to be not significant. However, the difference between the two groups with respect to dialect spoken and husband's occupation was found to be significant: language spoken, chi-square = 44.121, d.f.=1,  $p < 0.000$ ; husband's occupation, chi-square=22.273, d.f.=1,  $p < 0.000$ . It can be seen that all of the London subjects were Sylheti speaking, and all but one of the Bangladesh sample was Bengali speaking. With regard to occupation, all of the husbands in Bangladesh were engaged in non-manual employment (including professionals, management, and own business). In London, however, 65.4% of the husband's were engaged in manual employment (mainly working in restaurants). Of the 17 manual /unemployed category, only 4 were unemployed.



Table 1: Participant and partner details-means, frequencies and significance

	Total n=48	Bangladesh n=22	London n=26	p
Mother's age mean s.d. range	27.3 5.28 20-40	26.7 3.65 22 - 34	27.8 6.37 20 - 40	Not sig.
Mother's education primary only secondary/higher	9 39	2 20	7 19	Not sig.
Spoken dialect Bengali Sylheti	21 27	21 1	0 26	P<0.00
Husband's occupation non-manual manual/unemployed	31 17	22 0	9 17	P<0.00

Details regarding baby's age, family composition, number of people living in the household and number of other children for both groups are presented in Table 2. The scale of difference between the two groups in relation to baby's age was found to be statistically significant, with the baby's in the Bangladesh sample being significantly younger than those in the London sample:  $t=5.055$ ,  $d.f.=46$ ,  $p<0.000$ . However, research suggests that this difference is unlikely to affect the rate of postnatal depression detected in the population (Camden & Islington NHS Trust, 1998). The two groups were not significantly different with regard to family composition, number of people living in the household and number of other children.

Table 2: Family details – means, frequencies and significance

	Bangladesh n=22	London n=26	p
Baby's age(mths)			
mean	2.48	5.58	p<0.0001
s.d.	0.326	2.856	
range	2 - 3	3 - 11.5	
Family composition			
nuclear	14	15	Not sig.
extended	8	11	
No. of people in household			
mean	4.77	5.80	Not sig.
3-6	18	19	
7-10	4	7	
No. of other children			
0	8	7	Not sig.
1	11	9	
2	2	2	
3+	1	8	

### 3.1.2 Specific characteristics of London sample

As shown in Table 3, 61.5% of the London sample were 1<sup>st</sup> generation Bengali women. Those included in the 2<sup>nd</sup> generation category were women who had been born and primarily raised in the U.K., and women who had come with their families as children and had at least a few years education in the U.K. It can be seen that 15 of the mothers were first generation, monolingual women who had not had any education in the U.K.

Table 3: Frequency and percentage of participants in each category

	number	%
Generation		
1 <sup>st</sup>	16	61.5
2 <sup>nd</sup>	10	38.5
Education in U.K.		
yes	11	42.3
no	15	57.7
Bilingual		
yes	11	42.3
no	15	57.7

### **3.2 Quantitative validation of EPDS**

#### **3.2.1 EPDS analysis – reliability of translated version**

The reliability of the Bengali EPDS was tested using the results of the whole sample of 48 mothers. The internal consistency of the adapted measure was found to be reasonable ( $\alpha = 0.73$ ). The item-total correlations can also be seen in Table 4. It can be seen that all of the 10 EPDS items are significantly correlated to the EPDS total ( $p < 0.003$ ).

Table 4: EPDS item-total correlations for the whole sample

		EPDS total	Sig, (2-tailed)	N
Pearson Correlation	EPDS 1	.613	.000	48
	EPDS 2	.565	.000	48
	EPDS 3	.538	.000	48
	EPDS 4	.702	.000	48
	EPDS 5	.423	.003	48
	EPDS 6	.470	.001	48
	EPDS 7	.641	.000	48
	EPDS 8	.620	.000	48
	EPDS 9	.516	.000	48
	EPDS 10	.434	.002	48

#### **3.2.2 Correlation between EPDS and GHQ**

##### *General association between measures*

In order to assess the degree of relationship between the total EPDS scores and the total GHQ scores of the whole sample, a Pearson Correlation was carried out. The means and standard deviations of the groups are shown in Table 5. The measures were found to be positively correlated:  $r = 0.422$ ,  $p < 0.003$ .

Table 5: Means and standard deviations for total EPDS and GHQ scores

	EPDS total	GHQ total
<b>London</b>		
Mean	7.3846	4.9231
N	26	26
s.d.	4.742	4.586
<b>Bangladesh</b>		
Mean	5.5909	3.3636
N	22	22
s.d.	3.514	2.036
<b>Total</b>		
Mean	6.5625	4.2083
N	48	48
s.d.	4.277	3.696

*Association with respect to case identification*

The relationship between the two measures with regard to identification of cases was also assessed. Mothers obtaining a score  $\geq 12$  on the EPDS were identified as cases and those obtaining a score  $\geq 8$  on the GHQ were identified as cases. For the GHQ, the 0-0-1-1 scoring method was used. Using this method, the recommended threshold for case identification is 4 or 5. However, as the scale was being used on a sample of postpartum women, who were likely to obtain false positives on some items of the scale, the cut-off threshold was raised to 7. This was based on the Watson and Evans (1986) study on postpartum mothers, in which the authors similarly raised the threshold. Table 6 shows the frequencies of mothers identified as depressed or not depressed by both measures. It can clearly be seen that using the above thresholds, 42 of the total 48 participants were found to be not depressed on both measures, while only one was identified as depressed by both measures. The cell frequencies were analysed using chi-square and found to be not significant (chi-

square = 2.618, d.f.=1,  $p < 0.106$ ). Thus, with respect to case identification, agreement between the measures is not significant.

Table 6: EPDS 'caseness' versus GHQ 'caseness'  
(numbers in brackets indicate frequencies when EPDS threshold is 9/10)

EPDS 'caseness'	GHQ 'caseness'		total
	depressed	not depressed	
Depressed	1 (3)	2 (18)	3 (21)
not depressed	3 (1)	42 (26)	45 (27)
Total	4 (4)	44 (44)	48 (48)

Also shown in the table are frequencies for case identification using the EPDS threshold of 9/10. The authors suggested this lower threshold be used 'if the EPDS is used in the first stage of screening in a community study' (p.121. Cox, 1994), in order to reduce the rate of non-detection of actual cases. As can be seen, with this threshold, a much higher number of cases were identified as being depressed, i.e. in contrast to the previous 3 cases, 21 women scored  $\geq 9$ . Analysis using chi-square again found that agreement between measures in terms of case identification was not significant (chi-square=1.732, d.f.=1,  $p < 0.188$ ). It should be noted that since 18 cases were identified as depressed by the EPDS but not depressed by the GHQ, this may be an indication that this threshold leads to an over-detection of cases. This may be an indication that a threshold of 12 is more appropriate.

### **3.3 Validation – qualitative analysis of Bengali EPDS**

#### **3.3.1 Administration of the EPDS**

The authors of the EPDS recommend that it is self-administered, except in cases where there are literacy problems. Table 7 shows that, in this study, all of the Bangladesh group and 19 of the London group self-administered, while for 7 (27%) of the London group the researcher administered the measures. Of the seven women, 2 said they were unable to read, 3 said their Bengali was not very good, and 2 asked the researcher to administer without giving a reason.

Furthermore, over half (56%) of the entire sample required considerable clarification with regard to the procedure for completion of the EPDS.

Table 7: Frequencies of mode of administration of EPDS and GHQ

	London	Bangladesh	Total
Self-administered	19	22	41
Researcher-administered	7	0	7
Total	26	22	48

#### **3.3.2 Item by item analysis**

The original EPDS items and the back-translation of the items are presented in Table 8. Overall, it can be seen that the agreement between the two versions is good, with regard to back-translation. This suggests that an adequate level of semantic equivalence between the measures may have been achieved. However,

discrepancies or problems encountered in relation to a number of items need to be examined.

Table 8: Original and back-translated EPDS items

	Original	Back-translation
1	I have been able to laugh and see the funny side of things	I was able to laugh, and I could see the funny side of things
2	I have looked forward with enjoyment to things	I looked forward things
3	I have blamed myself unnecessarily when things went wrong	When something went wrong, I blamed myself for nothing
4	I have felt worried and anxious for no very good reason	I was worried and tense for no special reason
5	I have felt scared or panicky for no very good reason	Without any special reason, I was scared or too tense
6	Things have been getting on top of me	It seems everything is falling upon me
7	I have been so unhappy that I have had difficulty sleeping	I was so unhappy that I have difficulty sleeping
8	I have felt sad or miserable	I was unhappy or feeling low
9	I have been so unhappy that I have been crying	I was so unhappy that I cried
10	The thought of harming myself has occurred to me	The thought of hurting myself arose in my mind

Item 1

Although this item back-translated very well, it consistently required clarification with regard to its precise meaning. 45% of the Bangladesh sample and 77% of the London sample reported that they were not sure what this meant. These figures indicate that the Sylheti speakers (London sample) had more difficulty understanding the item.

Item 2

The back-translation of this item indicates that part of the original meaning was lost, i.e. the concept of enjoyment. Again this item consistently required clarification –

73% of the Bangladesh sample and 81% of the London sample reported that they were not sure what this meant.

Item 3

This item back-translated well and on the whole did not require explanation, with a few exceptions.

Item 4

The back-translation indicates that 'anxious' has been translated as 'tense'. Again this item did not require much explanation, but women frequently commented that they had felt worried and tense for good reason, e.g. baby unwell.

Item 5

In this item, the translation of 'panicky' was found to be problematic, and the Bengali version back-translated as 'too tense'. Again, as with item 4, women sometimes commented that they had felt this way, but for good reason.

Items 6, 7, 8 and 9

These items all back-translated reasonably well and did not require further explanation. For items 8 and 9 more than 50% of mothers asked whether the question was related to the baby, e.g. 'Does this mean have I cried/felt unhappy because of the baby'.



Item 10

This item again back-translated well. However, it was noted that in cases where the researcher administered the scale, women seemed surprised by the item and immediately responded with 'No never', before hearing all the response options.

It can be seen that while most of the items were found to be acceptable to the participants, a few were considerably problematic. Furthermore, after completing the measure, several participants made some general comments regarding the scale, e.g:

'I'm not sure what these questions are getting at.'

'These questions seem odd.'

'I'm not sure if I have done this properly, the questions seem strange.'

### **3.4 Qualitative Analysis of Bengali GHQ**

#### **3.4.1 Administration of GHQ**

The GHQ is also designed to be self-administered as is the EPDS. Table 7 shows the number of participants who self-administered and the number who did not.

#### **3.4.2 Item by Item Analysis**

The original GHQ items and the back-translation of the items are presented in table 8a. Overall it appears that the agreement between the two versions is good, suggesting that a reasonable level of semantic equivalence may have been achieved.

However discrepancies or problems encountered with respect to some of the items need to be examined more carefully.

Table 8a: Original & back-translated GHQ items

	<u>Original</u> Have you recently...	<u>Back-translation</u> Do you recently / currently...
A1	Been feeling perfectly well and in good health?	Feel completely well and in good health?
A2	Been in need of a good tonic?	Feel that you need some good medication?
A3	Been feeling rundown and out of sorts?	Feel neither too well nor too bad?
A4	Felt that you are ill?	Feel that you are unwell?
A5	Been getting pains in your head?	Feel you are suffering from headaches?
A6	Been getting a feeling of lightness or pressure in your head?	Feel any tenderness or pressure in your head?
A7	Been having hot or cold spells?	Suffer from hot or cold flushes?
B1	Lost much sleep over worry?	Lose sleep because of worries?
B2	Had difficulty in staying asleep?	Find that you're waking from sleep?
B3	Felt constantly under strain?	Always feel you are facing some problem?
B4	Been getting edgy or bad tempered?	Suffer from irritability and bad temper?
B5	Been getting scared or panicky for no good reason?	Feel scared or anxious without any particular reason?
B6	Found everything getting on top of you ?	Feel as if all the problems are coming on top of you?
B7	Been feeling nervous and strung-up all the time?	Feel slightly anxious and irritable all the time?
C1	Been managing to keep yourself busy and occupied?	Feel you are attentive towards keeping yourself busy?
C2	Been taking longer over the things you do?	Feel you are spending more time than usual in your tasks / work?
C3	Felt on the whole you were doing things well?	Feel you are doing all your work properly?
C4	Been satisfied with the way you've carried out your task?	Feel you are satisfied with your work?
C5	Felt that you are playing a useful part in things?	Feel that all you are doing is useful?

C6	Felt capable of making decisions about things?	Feel you are able to make decisions?
C7	Been able to enjoy your normal day-to-day activities?	Feel you can enjoy your normal day-to-day work?
D1	Been thinking of yourself as worthless person?	Think that you are a valueless person?
D2	Felt that life is entirely hopeless?	Fell that life is completely hopeless?
D3	Felt that life isn't worth living?	Feel that there is no use in staying alive?
D4	Thought of the possibility that you might make away with yourself?	Think that you may destroy yourself?
D5	Found at times that you couldn't do anything because your nerves were too bad?	Feel that you are not capable of doing anything because your thinking power is reduced?
D6	Found yourself wishing you were dead and away from it all?	Feel that it would be better to leave everything and die?
D7	Found that the idea of taking your own life kept coming into your mind?	Think about committing suicide?

*Item A1-A7: Somatic symptoms*

Overall, the items in this section back translated very well and did not require much clarification during administration. Item A3, however proved difficult to translate into Bengal, resulting in considerably different wording, as can be seen from the back translation.

*Item B1-B7: Anxiety / Insomnia*

Again most of the items in this section back-translated very well and did not require much clarification. The translation of 'under strain' and 'panicky' in items B3 and B5 respectively were found to be problematic. The Bengali version of 'under strain', back-translated as 'always... facing some problem' and the Bengali version of 'panicky' back-translated as 'anxious'.

*Item C1-C7: Social Dysfunction*

Overall, the translation of items in this section were found to be more problematic and during administration clarification was consistently required. Although the back-translation of items in this section indicate a good degree of semantic equivalence, participants seemed to have difficulty with the conceptual meaning of items for example, with item C1 some participants commented 'there's so much to do, of-course I'm busy'. Similarly, with item C4 some women commented that 'there's lots of work I have to do, what's there to be satisfied about?' Also, for item C7 with reference to day-to-day activities / work, some women commented 'what's there to enjoy?' It should be noted that these comments come from women in the London sample.

*Item D1-D7: Depression*

Whilst the items in this section back-translated reasonably well, many participants appeared to have difficulty with the acceptability of the items. Participants tended to respond with 'No' very quickly and often made comments such as 'I'm a mother, I have my children to live for' or 'My children need me, I could never think in this way.'

In addition to the above mentioned problems in relation to actual items in the questionnaire, many participants seemed to have difficulty in selecting one of the symptom-severity responses and preferred to respond with 'Yes' or 'No'. Also some women responded with 'same as usual' before hearing all the response options. These response patterns were only highlighted when the questionnaire was administered by the researcher.

### **3.5 Factors associated with EPDS scores**

The effect of three independent variables, practical support, emotional support and context on EPDS scores were examined.

#### **3.5.1 Descriptive analysis**

##### **Context**

Table 9 shows the shows the number of participants, the mean EPDS scores and the number of cases for the London sample and the Bangladesh sample. It can be seen that there were no clinically significant cases identified in Bangladesh while there were three identified in London (using a threshold score of 12). The mean EPDS score was slightly lower for the Bangladesh sample than the London sample, although the difference was not statistically significant.

Table 9: No. of participants, mean EPDS scores and cases by context

	n	EPDS score (s.d.)	Cases (threshold=12)
London	26	7.38 (4.742)	3
Bangladesh	22	5.59 (3.514)	0
Total	48		3

##### **Practical support**

From the semi-structured interviews, extent of practical support was coded into three categories: no support, support with baby *or* household chores, and support with baby *and* chores. Table 10 shows the frequencies of mothers reporting the different

levels of support for the whole sample, the corresponding mean EPDS scores at each level, and the number of clinically significant cases identified. It can be seen that the EPDS scores fall as the amount of practical support increases as do the number of identified cases. The relationship between EPDS scores and practical support for each of the samples can be seen in Figure 1.

Table 10: Frequencies, EPDS scores and cases associated with practical support

Practical support	n	EPDS score (s.d.)	Cases (threshold=12)
None	6	12 (2.967)	2
Baby or chores	12	7.25 (4.393)	1
Baby and chores	30	5.20 (3.547)	0
Total	48		3

The amount of support received by women in each of the two groups can be seen in Figure 2. It can be seen that none of the participants in the Bangladesh sample reported having no practical support and 18 of the 22 (82%) had support with the baby and chores. In contrast, 23% of the London sample reported having no practical support, while 46% had support with baby and chores.

Figure 1: Graph showing the relationship between EPDS scores and practical support

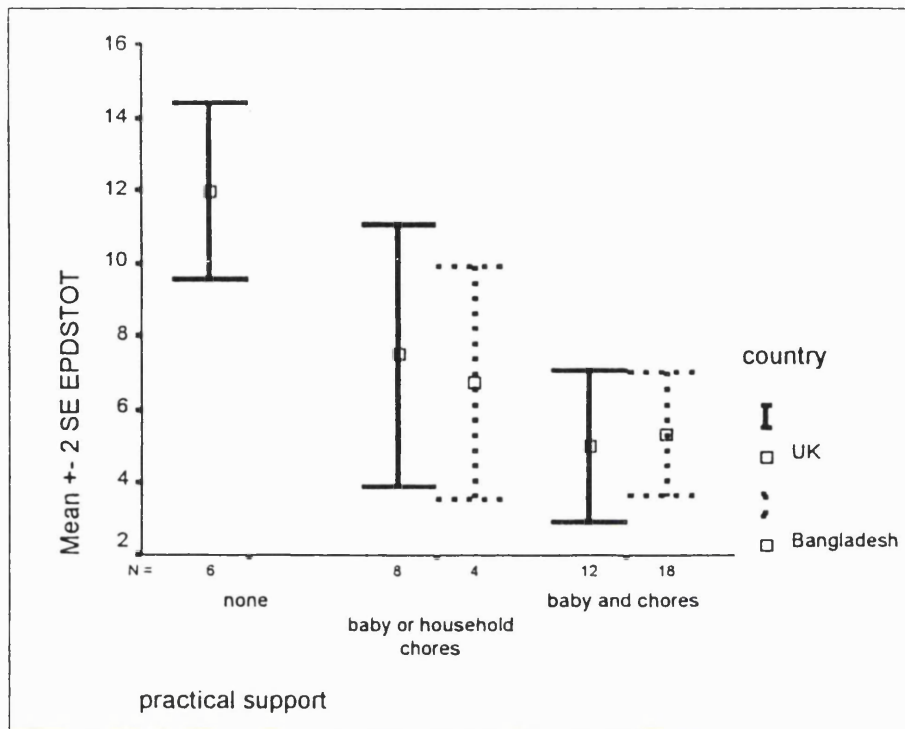
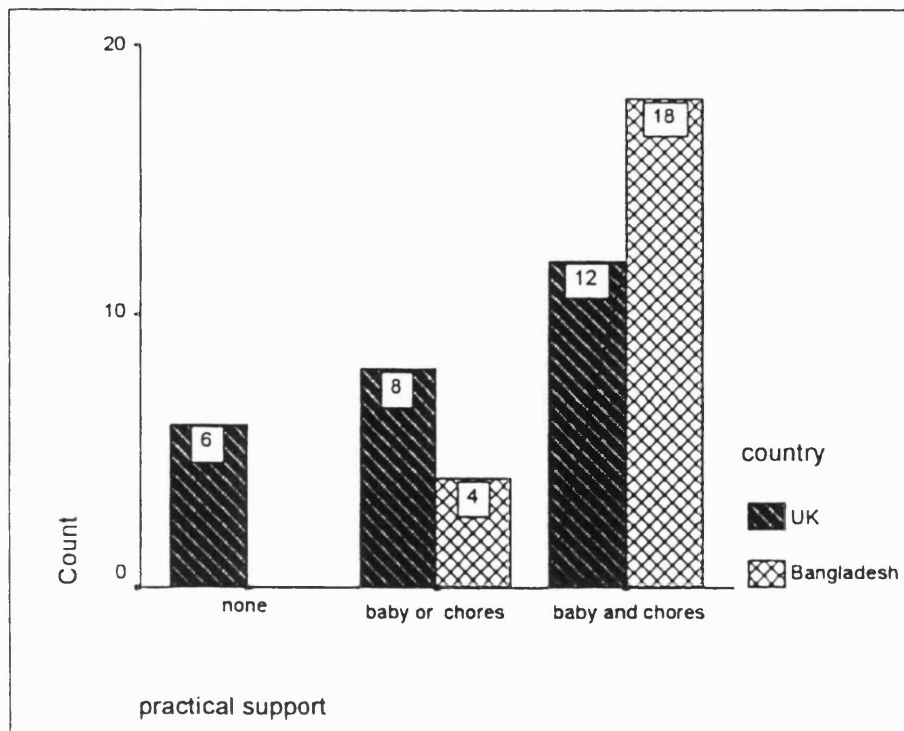


Figure 2: Bar chart showing the amount of practical support reported by each group



Emotional support

From the interviews, the amount of emotional support was coded into three categories: no support, one confiding relationship, and more than one confiding relationship. Table 11 shows the frequencies of mothers reporting the different levels of emotional support for the whole sample, the corresponding mean EPDS scores at each level, and the number of clinically significant cases identified. Again it can be seen that the EPDS scores fall with the increase in confiding relationships, as do the number of identified cases. The relationship between EPDS scores and emotional support for the U.K. group and Bangladesh group is illustrated in Figure 3.

Table 11: Frequencies, mean EPDS scores and cases associated with emotional support

Emotional support	n	EPDS score (s.d.)	Cases (threshold=12)
None	9	10.67 (2.967)	2
Single confiding rel.	25	6.48 (3.732)	1
More than one confiding rel.	14	4.07 (3.222)	0
Total	48		3

The amount of emotional support received by women in each of the two groups can be seen in Figure 4. This shows that most of the mothers in each group reported having at least one confiding relationship: U.K.= 73%, and Bangladesh = 91%. However the proportion of mothers reporting having no emotional support was greater in the U.K. sample (27%) than the Bangladesh sample (9%).



Figure 3: Graph showing the relationship between EPDS scores and emotional support

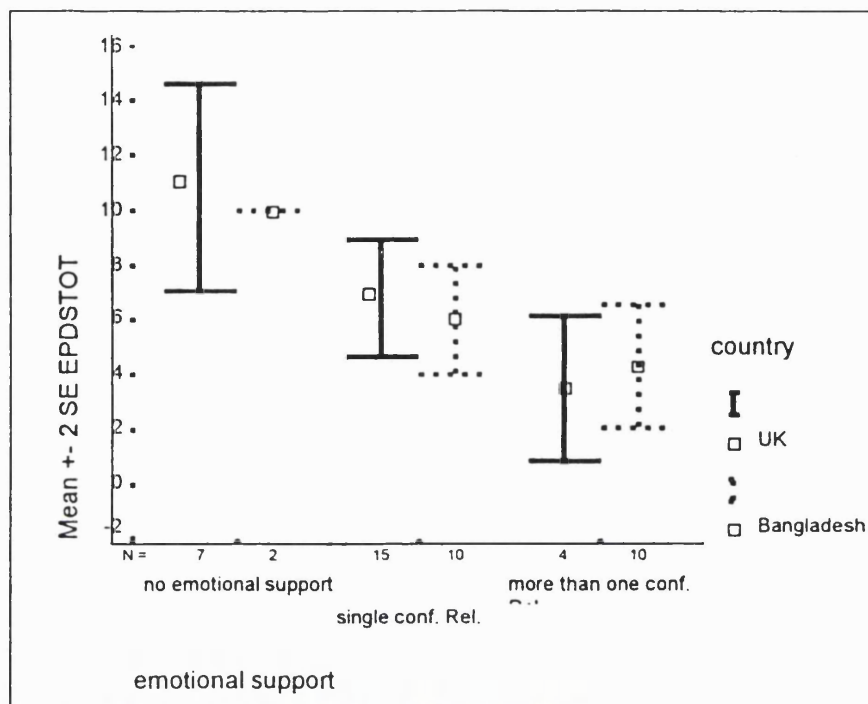
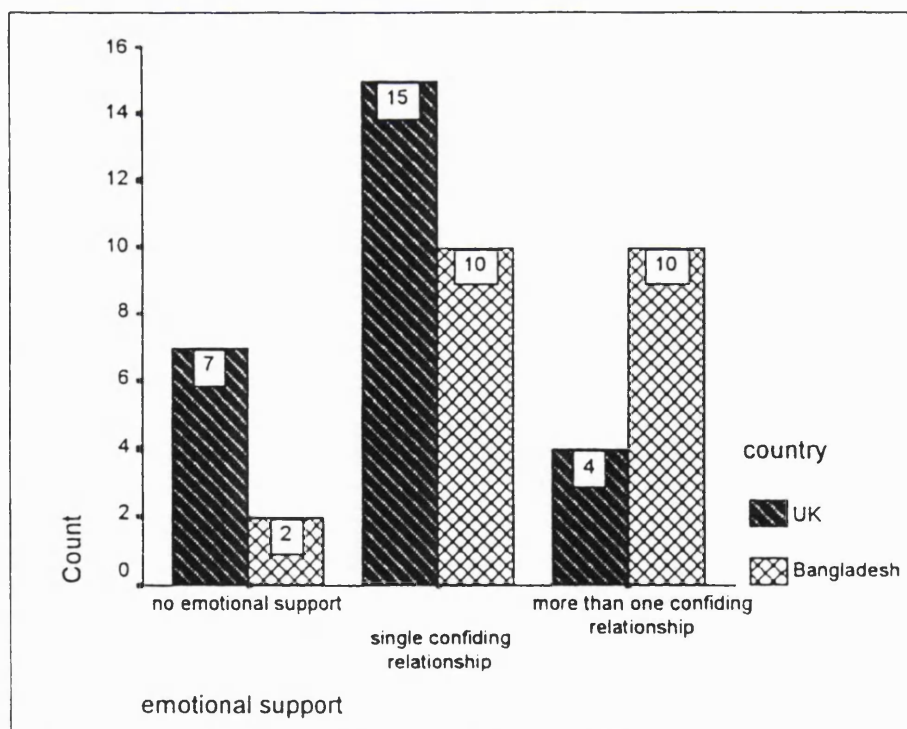


Figure 4: Bar chart showing the amount of emotional support reported by each group



### 3.5.2 Inferential analysis

In order to test the effect of practical support, emotional support and context on EPDS scores a 3-way ANOVA (3x3x2) was carried out.

The main effects revealed:

- a) a significant effect between practical support and EPDS scores:

$$F(2,39) = 3.29, p < 0.05$$

- b) a significant effect between emotional support and EPDS scores:

$$F(2,39) = 3.31, p < 0.05$$

- c) no significant effect between context (i.e. country) and EPDS scores:

$$F(1,39) = 0.145, p < 0.706$$

The effect of the interaction between practical support and context on EPDS scores was found to be not significant:  $F(1,39) = 0.052, p < 0.820$ . Likewise the interaction between emotional support and context was also found to be not significant:  $F(2,39) = 0.068, p < 0.934$ . Thus, the effect of social support on EPDS scores was independent of context.

Further multiple regression analysis was carried out to test the predictive effect of a number of independent variables on EPDS scores. These variables included country, family composition, mother's age, number of people living in household, baby's age, and number of other children, husband's occupation. Taking all the predictors together in this model,  $R=0.594$ ,  $R^2 = 0.353$  and  $F(6,41) = 3.73, p < 0.005$ . This suggests that 35% of the variance in the overall EPDS scores can be predicted on the basis of all these predictors. However, when taken independently, the only

single significant predictor of EPDS scores was found to be mother's age:  $\beta = -0.404$ ,  $t = -2.06$ ,  $p < 0.05$ . This indicates that the younger the mother, the more likely she is to have a higher EPDS score.

A further 3-way ANOVA was carried out in order to test the effect of practical support, emotional support and mother's age on EPDS scores.

The main effects revealed:

a) a significant effect between practical support and EPDS scores:

$$F(2,12) = 7.17, p < 0.05$$

b) a significant effect between emotional support and EPDS scores:

$$F(2,12) = 6.14, p < 0.05$$

The effect of the interaction between emotional support and mother's age on EPDS scores was found to be not significant:  $F(4,12) = 2.904$ ,  $p < 0.068$ .

However, the interaction between practical support and mother's age was found to be significant:  $F(4,12) = 4.35$ ,  $p < 0.05$ . Thus, the effect of practical support was found to be dependent on mother's age.

### **3.6 Qualitative analysis of the three identified cases**

All 3 cases identified were in the London sample. One was first generation and two were second generation. All 3 of the cases reported that their current symptoms predated the birth of the baby. In fact two of the mothers reported that the baby was the best thing that had happened to them. They further reported that they felt resentful and guilty that they were unable to spend more time interacting and playing

with their baby due to other family commitments. Both of these women were second generation, bilingual mothers, living within extended families and experiencing family problems. In addition, one of these women reported marital problems. The first generation mother reported considerable financial problems. All three women reported inadequate social support.

Thus, all three mothers had a lack of adequate support and were experiencing at least one other significant problem.

**CHAPTER  
FOUR:**

**DISCUSSION**

## **DISCUSSION**

The aims of the current study were to develop a Bengali version of the Edinburgh Postnatal Depression Scale, assess its validity as a tool for detecting postnatal distress in Bengali women, and examine the relationship between social support and postnatal depression. The adapted measure was validated against the General Health Questionnaire on a sample of women recruited from Bangladesh and London. The findings, interpretations and clinical implications are discussed below.

### **4.1 Reliability and validity of the EPDS with Bengali women**

#### **4.1.1 Quantitative findings**

With respect to reliability, the quantitative findings of this study indicate that the Bengali version of the EPDS has adequate internal consistency ( $\alpha = 0.73$ ) and significant item-total correlations ( $p < 0.003$ ). The internal consistency, which is only one measure of reliability, is less than that found with other translated versions of the EPDS, e.g. the Icelandic version ( $\alpha = 0.80$ , Thome, 1991); the Dutch version ( $\alpha = 0.80$ , Pop et al., 1992). In addition to this, although the EPDS and GHQ were found to be positively correlated with respect to overall scores ( $r = 0.422$ ,  $p < 0.003$ ), the strength of the correlation was poor. Furthermore, agreement between the two measures with respect to case identification was found to be not significant, whether using the threshold score of 12 or 9/10. Using the adapted measure, the prevalence of postnatal depression in the London sample of Bengali women was found to be 11.5% (3 cases were detected out of a sample of 26 mothers, using the threshold

score of  $\geq 12$ ). This rate of prevalence is indeed comparable to the prevalence rates of 10-15% found through previous research in Western populations (e.g. Cox et al., 1982; Kumar and Robson, 1984; Cooper et al., 1988). However, the issue of such cross-cultural comparison will be discussed later. In contrast, however, no cases were detected by the measure in Bangladesh. The possible reasons for this finding will also be discussed later.

These preliminary quantitative findings provide little evidence of the reliability or validity of the Bengali EPDS. It is important to consider at this stage that there are no measures of psychological distress that have been validated for use with this population. In addition to this, little quantitative or qualitative information is available regarding postnatal distress in the Bengali culture. Thus, there is no reliable and valid measure against which to test the validity of the Bengali EPDS. For the purposes of this study the Bengali EPDS was validated against a Bengali version of the GHQ. Although a Bengali GHQ has been previously used in research, its psychometric properties have not been established. As such, it is not sufficient to test the validity of one translated measure against another which is equally subject to the problems of reliability and validity. Thus, before any conclusive statements can be made a great deal more research is required to establish the psychometric properties of the Bengali EPDS. Recommendations for future research are made later in the discussion.

#### 4.1.2 Qualitative findings

The validity of the Bengali version of the EPDS needs to be considered within the framework of content, semantic, technical, criterion and conceptual equivalence proposed by Flaherty et al., (1988).

*Content equivalence* – Prior to translation, the content, i.e. behaviour or symptom described in each item was judged as being relevant and applicable to the Bengali culture.

*Semantic equivalence* – The results indicate a reasonable level of semantic equivalence when comparing the back-translation with the original EPDS. However, it became apparent during the administration of the Bengali scale that although the written form presented adequate semantic equivalence, some of the items were not idiomatically appropriate. That is, some items were not representative of everyday expression and language. For example, the first item repeatedly required clarification, a pattern that was more pronounced with the Sylheti speakers who may be less familiar with certain Bengali words that may not be widely used in everyday language. It is likely that this item would have been more easily understood if it had been written in the form ‘I have been able to laugh and have fun.’ The second item on the scale similarly required clarification frequently. While the expression of ‘looking forward to things’ is common in the English language, translating this into Bengali was found to be problematic, as a phrase with similar meaning used in everyday Bengali language could not be easily identified. Further consultation with bilinguals will be required to try and identify a more idiomatically appropriate phrase that will make more sense to Bengali women. The main issue to consider in relation to the problems of semantic equivalence described here is the extent of further explanation required, and the effect this has on the validity of the scale. It is



inevitable that the more extra explanation is given, the less standardised the scale becomes, thus diminishing its validity. Thus, it is essential that careful further consideration be given to the relevant items in order to achieve greater semantic equivalence.

*Technical equivalence* – There are a number of points that need to be discussed in relation to technical equivalence. In general, participants in Bangladesh and London seemed to expect that they would be asked questions by the researcher and were surprised when they were asked to complete the scale themselves. In London this was particularly the case with first generation women. In addition to this, some women seemed to perceive the scale as a test, and after completion asked ‘Is that right?’ or ‘Are my answers alright?’ These observations indicate that the participants are not familiar with self-administered measures of this type, which might effect the way in which women respond to the scale. Another difference with respect to administration was that, while the original EPDS was designed to be completed in about 5-10 minutes, the average completion time for subjects in this study was 20 minutes. It was noted during administration that some items took longer to complete as they were read several times before a response was given. When the researcher administered the scale, women often asked for items to be repeated, especially the response options. There was also a tendency for women to respond before hearing all the response options. This further indicates that either women had difficulties understanding the items, or were uncomfortable with the response mode of choosing one of four options.

*Criterion equivalence* – Another problem with item number two, concerning criterion equivalence, was identified in relation to the London sample. On a number of occasions, after the item was further clarified, women seemed unable to relate to

the item as they commented that 'there is nothing really to look forward to'. They further expressed that all they do is look after the children and do housework, so it was difficult to think of anything that they could look forward to. This was more so the case in some first generation women who did not appear to be complaining when making such comments. Rather they expressed that this was their role in life, and there is nothing else that they needed to be doing. In order for criterion equivalence to be achieved a measure is required to be able to assess a phenomena in both cultures such that the outcome can be interpreted in the same way in both cultures. In this instance it seems that further consideration needs to be given to the cultural meaning and relevance of the second item.

There are a number of further general qualitative findings that need to be considered. Firstly, it seemed that as the scale starts with the introduction, 'Since you have recently given birth to a baby', women frequently thought they were being asked about their feelings in relation to the baby, rather than their own feelings of well-being during the last week. This was particularly highlighted by items 8 and 9, as more than half the sample asked questions to the effect, 'Does this mean have I cried/felt unhappy because of the baby'. This is an important issue as mothers' responses are likely to be effected if they feel they are being asked specifically about their feelings towards the baby. This indicates that, in addition to the instructions given on the actual scale, further clearer information with regard to the purpose of the scale may be necessary for some mothers.

Another general observation was that for items 4 and 5 many participants tended to overlook the words 'for no good reason' and proceeded to give valid reasons for being worried or tense. In addition to this, some items, e.g. I was so unhappy that I

cried, were found to be useful for prompting women to talk about any problems they were experiencing.

Thus, taking into account quantitative and qualitative findings, the above discussion indicates that quantitatively the Bengali EPDS was found to have limited reliability and validity; and qualitatively, a number of discrepancies that need further investigation have been highlighted.

Although the above discussion focuses on the Bengali EPDS, it should be stressed that very similar problems of scale equivalence were found with the Bengali GHQ. In particular, as with the EPDS, many items that seemed to translate reasonably well were found to be conceptually problematic. This was particularly evident in the social dysfunction and depression sub-scales. It is likely that this is because these concepts are more dependant on cultural factors than the somatic and insomnia sub-scales.

#### **4.2 Relationship between social support and postnatal depression**

The findings of this study indicate that there is a significant relationship between social support and distress experienced, as measured by the Bengali version of the EPDS. It was found that the more practical support mothers' had the more likely they were to have a lower EPDS score:  $F(2,39) = 3.29, p < 0.05$ . Also, the more emotional support they had the more likely they were to have a lower EPDS score:  $F(2,39) = 3.31, p < 0.05$ . The influence of context on EPDS scores was found to be not statistically significant, although the mean EPDS score for the Bangladesh sample (mean=5.59) was lower than the mean score for the London sample (mean=7.38). The results further indicated that the younger the mother, the more

likely she is to have a higher EPDS score. It was further found that while the effect of emotional support on level of distress was independent of the mother's age, there was a significant interaction between practical support and mother's age:  $F(4,12) = 4.35, p < 0.05$ . This indicates that the effect of practical support was found to be dependent on mother's age. This could perhaps be associated with the stresses of new motherhood. In addition to context, the effect of social support was also found to be independent of other demographic variables such as husband's occupation. The qualitative data from the three identified cases gives further evidence of the relationship between social support and psychological distress. All three cases reported inadequate support and at least one other significant problem.

The relationship between social support and postpartum psychological distress in Bengali women replicates findings of previous research with other cultural groups. As reviewed earlier, numerous studies have consistently found a relationship between postnatal depression and inadequate social support (e.g. Paykel et al, 1980; O'Hara, 1986; Collins et al, 1993). These studies have looked at the importance of emotional and practical support provided by the partner during pregnancy and in the postpartum period, as the partner is perceived as the most significant support provider. However, in the current study it was found that the husband was often not the only or significant support provider. In addition to or instead of husbands, women identified their mother or other family member as a significant support provider. With respect to emotional support, most women (in the London sample in particular) identified another family member as their confidante.

With respect to the conceptual equivalence of the scale, these results are promising. As explained earlier, conceptual equivalence is usually investigated by assessing the relationship between constructs (i.e. postnatal distress and social support), and

comparing the relationship with the previously identified relationship between the constructs. In this study the same relationship has been identified as that found in previous research. As such, this finding perhaps provides a preliminary indication of validity of the Bengali EPDS. However, this comparison should be viewed cautiously as, although the use of the EPDS is comparable with other studies, the social support measure is not.

### **4.3 Contextual considerations**

As mentioned earlier, the mean EPDS score of the mothers in Bangladesh was lower than the mean EPDS score of the Bengali mothers in London. The same pattern was found in relation to the mean GHQ scores of the two groups. Although the differences were not statistically significant, it is worth identifying possible factors that may have contributed to this outcome, particularly since no cases of postnatal depression (using the threshold of  $\geq 12$ ) were identified in Bangladesh.

Firstly, there were some differences with respect to social support. In Bangladesh all of the participants reported having multiple support providers, while 46% of the London sample had more than one provider of support, 31% had a single support provider and 23 % reported having no one to provide practical support. In terms of actual practical support, 82% of the mothers in Bangladesh reported having help with the baby and household chores while no one reported having no practical support. In London, however, 23% reported having no practical support, while 46% had support with the baby and chores. Similarly, with emotional support, only 9% of the Bangladesh sample reported having no emotional support, while 27% of the London sample reported the same. Thus, in terms of support available the women in

Bangladesh were considerably more fortunate. Interestingly, when participants in London were asked about social support, many of the mothers (particularly first generation) reported that 'It's not like in Bangladesh here. There's no one to help you here, you have to do all the work yourself.' Also, one second generation women, who had just returned from Bangladesh two weeks prior to the interview, reported feeling very low since returning because of the pressures of looking after the children and home. She reported that, in Bangladesh there are numerous people to help with the children and servants doing the housework. Furthermore, several of the mothers in Bangladesh were interviewed at their parental home where they had been staying since the birth of the baby, so that they could rest and be properly looked after by other members of the family. This provides reinforcement for the anthropological perspective, providing evidence of Stern and Kruckman's (1983) proposition that non-Western cultures have a socially structured postpartum period. The researcher further observed during the home visits that the mothers in Bangladesh tended to be more relaxed during the interview, not having to attend to the baby, other children or any other matters as there were other people to take care of things. However, the London interviews were generally more disrupted as mothers were often trying to manage babies, other children and household chores at the same time. In comparing mothers in British households with those in Indian households, Pound (1996) reported that:

'Especially after the birth of the first child, an Indian mother is expected to rest for six weeks, while the other women of the household perform all the household chores and cook her special dishes to build up her strength. She is visited daily by other members of the family, is given presents to emphasise her new status and is kept free from anxiety. Meanwhile, she

has plenty of time to relate to her baby untroubled by household cares.

Western women return home after a few days in hospital and often take on full responsibility for the household immediately.' (p.203; Pound, 1996)

While this description may seem somewhat idealistic, it is in fact closer to what a new mother in Bangladesh can expect than what a new Bengali mother in London can expect. The Camden inner city Bengali mothers are more likely to have to return from hospital and resume household duties. Indeed some mothers commented during the interviews that they felt they were sent home from the hospital too soon after the birth of the baby and were not given the opportunity to rest. Although it is perhaps practised less these days, particularly in urban environments, within the Bengali culture women are allowed to rest fully with family support, for a period of 40 days after the birth of a baby.

Another difference to consider between the two groups is the extent of other problems being experienced by the mothers. In the Bangladesh sample 86% of mothers reported that they had no other problems or worries significantly effecting the way they are feeling, while 14% identified one other problem and no one reported more than one problem. In contrast, 15% of the London sample reported more than one other significant problem, 31% identified one other problem and 54% reported no significant problems or worries effecting their current feelings. The problems reported included housing issues, immigration, financial, marital and family problems. This is not entirely surprising as the London sample were recruited from an inner city Bangladeshi community in which poor housing, low paid jobs, communication difficulties are common socio-economic factors (Equalities Unit,

1996). Previous research with other populations has found that such socio-economic factors are likely to contribute to the development of postnatal depression (Brown and Harris, 1978; Murray, 1995). A study looking at Asian populations also found that socio-economic factors such as employment, housing and marital or family relationship problems influence the development of depression (Beliappa, 1991). In the current study, in addition to lack of social support, the three cases identified as depressed were experiencing financial, marital or family problems.

Thus, it would seem that a combination of social support differences and socio-economic conditions are likely to have resulted in the Bengali mothers in Bangladesh obtaining lower EPDS and GHQ scores than the Bengali mothers in London.

#### **4.4 Methodological limitations of the study**

This study has a number of methodological limitations that need to be considered, including sampling issues, measures and issues of cultural comparison. Firstly, sampling issues include size, representativeness and comparability of the two samples. With respect to size, the numbers of participants was small. This was mainly due to limitations of time, particularly since the study was cross-contextual, being conducted partly in Bangladesh and partly in London. Taking into consideration the time scale of the project and the design, it would not have been possible to recruit much larger sample sizes. Unfortunately, in addition to this, as participants were being contacted at home, recruitment was dependent on participant accessibility, i.e. they had to be contactable by phone. Both in Bangladesh and in London this proved to be problematic, thus resulting in a shortfall of the original



anticipated numbers of thirty in each sample. Having said this, however, for purposes of validation of the EPDS it was possible to put the two samples together, resulting in a larger sample size of 48, thus increasing the power of the validation slightly.

With respect to the representativeness of the sample, the London sample was representative of inner-city Bengali women, as participants were selected from the birth books of two inner-city Camden health visitors. The Bangladesh sample, however, was a more selective sample. This was firstly due to a lack of routine record keeping by health services in Bangladesh. Within the time available recruitment had to be arranged through a private ultrasound scanning clinic. In addition to this, as home visits were being conducted, accessibility of participants resulted in further recruitment bias. Thus, it would be fair to say that the sample selected was not representative of the Bangladesh population as a whole, and perhaps not representative of the general population of Dhaka. In terms of comparability of the samples, they are both urban samples within different contexts. However, it is likely that they originate from quite different backgrounds. In this respect, comparison of a sample of Bengali women living in Sylhet with the sample of Sylheti women living in Camden would have been ideal. Again this was not feasible within the time available. Another significant difference between the groups was found to be husband's occupation, with the entire Bangladesh sample being in non-manual employment and 65.4% of the London husbands engaged in manual employment. This, however, does not necessarily suggest a significant difference between the groups in terms of economic status relative to their context.

Secondly, the measures used in this study raise a number of methodological issues. For the purpose of validating the Edinburgh Postnatal Depression Scale, the GHQ

was selected. However, is the GHQ a valid measure of validity? Unfortunately, no measures of psychological distress have been previously validated on a Bengali population. (At least published evidence was not found to this effect). Thus, in the absence of a suitable validated measure, the GHQ was selected for a number of reasons. Firstly, the GHQ had previously been used with postpartum Bengali women in London (Watson and Evans, 1986) with some success. Secondly, it has been translated into numerous languages, validated and widely used cross-culturally in both Western and non-Western settings. However, the problem still remains that it has not been proven to be an empirically reliable and valid measure for use with the Bengali population. In fact, the GHQ is equally subject to the problems of scale equivalence that this study is attempting to address.

Another issue to consider is the validity of the social support measure, i.e. the semi-structured interview. Although this was loosely based on a validated measure (i.e. validated on a Western sample), it was essentially developed by the researcher and not independently validated in any way. Although numerous measures of social support are available, it was felt that such measures might be too structured and rigid. As two structured measures were being used in this study with a cultural group that is not accustomed to using such measures, it was decided that the semi-structured interview should be kept as informal as possible.

With respect to using the results of the study for cross-cultural comparison a number of factors need to be considered. It must first be acknowledged that the EPDS is culture-specific in development. This means that it was developed on the basis of Western concepts of depression and validated on Western subjects. The threshold score(s) identified for detection of postnatal depression is in relation to Western norms and standards. Bearing this in mind, it follows that while similar symptoms

may be present within the Bengali culture, the cultural meaning and frequency of symptoms may be considerably different. If this is the case, the threshold score(s) may not be appropriate for Bengali women. As the aim of the current small scale pilot study was to adapt the EPDS for use with the Bengali cultural group, the preliminary findings are not empirically sufficient to assume that scale equivalence has been achieved, and cross-cultural comparison can be made. In a study such as this, cultural differences are of paramount importance if cross-cultural comparisons are to be made. This is based on the argument that the relative effect of cultural factors is dependent on the aetiology of the disorder in question (Leff, 1990; Littlewood, 1990). That is, to what extent does the disorder in question have a biological versus a sociological aetiology? They argue that the effect of culture may be less pronounced in disorders where the aetiology is more likely to be biological (e.g. bipolar depression, psychotic depression). However, since postnatal depression has been found to have a primarily psychosocial aetiology, consideration of cultural factors is particularly important. With respect to cross-cultural comparison, Leff (1990) further argues that the 'cultural distance' between the groups in question needs to be taken into account. Thus, the more culturally distant the groups being studied are, and the more likely the disorder in question has a sociological aetiology, the greater the importance of investigating cultural variations. Since the distance between Western cultures and the Bengali culture is considerable, and the likely aetiology of postpartum depression is sociological, legitimate theoretical or empirical cross-cultural comparison is difficult without further knowledge of the cultural differences with respect to conceptualisation and presentation of postpartum depression.

#### **4.5 Clinical implications of the study**

The outcome of this study has a number of clinical implications. Firstly, in view of some of the limitations described above, at present the Bengali EPDS should not be used for purposes of cross-cultural comparison. However, this pilot study has highlighted certain problems relating to the adaptation of the measure and its validity with the Bengali population which can be taken into consideration to further modify the Bengali version with a view to achieving greater scale equivalence. Some modifications have already been suggested regarding the wording of certain items, earlier in this discussion.

By incorporating these modifications, the results of the study indicate that the Bengali EPDS can be used for detecting psychological distress in postpartum Bengali women, though not simply as a self-report questionnaire. Marsella (1987) argued that scale equivalence issues are less important if the measure in question is being used for screening within a certain culture, and the results are not used for cross-cultural comparison or generalisation. While it is not being suggested that adequate scale equivalence for the purpose of cross-cultural comparison cannot be achieved, it is important to acknowledge that a considerable amount of further work is required before it can be assumed that a confident level of equivalence has been achieved.

While it is recommended that the measure can be used with Bengali women, a number of practical and clinical implications need to be taken into consideration. Firstly, in view of the technical equivalence problems highlighted earlier, it is suggested that the Bengali EPDS is administered by the health professional with the help of interpreters or Bengali health advocates. It is also important that those involved in the administration have a good knowledge and understanding of the

measure. In the current study it was found that women frequently asked questions regarding the purpose of the measure, the completion of the measure and sought clarification regarding individual items. In addition to this, explaining and introducing the measure to mothers needs careful consideration, as some of the questions presented by women in this study suggest some confusion in the comprehension of the introductory paragraph of the scale. The most significant example in this respect is that some mothers thought they were being asked about their feelings about their baby, which poses significant clinical implications.

Furthermore, as recommended by the authors, the Bengali EPDS should only be used in conjunction with the clinical judgement of the health professional. Of particular importance is the use of the recommended threshold score(s) which, as explained earlier, may or may not be appropriate for this cultural group.

At this stage, the Bengali EPDS is best considered as a tool for creating the space and environment to allow postnatal Bengali mothers the opportunity to express feelings of psychological distress that they may be experiencing, rather than a screening tool. This then leads to the consideration of where to administer the scale. As home visits were conducted in this study, it was found that sometimes other family members were present during the interview. Having said this, in most cases it was possible to suggest that the interview be conducted in private. Although conducting the interview in a separate room was more helpful, other family members were often nearby. This may be likely to influence the mothers' responses. Indeed, Cox et al (1987) found that the presence of other family members during the interview did influence EPDS scores, and recommended that the scale should be administered when others are not present.

The outcome of this pilot study has some immediate clinical implications for health professional working with postnatal Bengali women in the London Borough of Camden. Health visitors have recently raised concerns regarding the nature of postnatal care/services available to Bengali women, and have identified that they may not be meeting the actual needs of Bengali women living in Camden. A paper looking at Bengali women's views on maternity services has reinforced these concerns (Duff et al, 1996). As a result of this, there have recently been concerns that perhaps Bengali mothers suffering from some form of psychological distress during the postpartum period are not being identified and thus, appropriately supported. While there are now initiatives in Camden to modify and improve postnatal care, and implement the routine use of the EPDS for screening women in the Borough, these initiatives have not been easily transferable to the Bengali population as an appropriate measure was not available. Indeed, this issue is clearly highlighted in the results of a recent pilot study of screening and treatment of postnatal depression in the Borough in which no Bengali women were formally screened. Altogether 20% of the subject group were not screened, of which a large proportion were Bengali (Camden and Islington Community Health Services NHS Trust, 1998). Although considerable modification and much validation work is required, the Bengali version of the EPDS developed in this study can be used as a tool for initiating and / or facilitating expression of psychological distress, within the guidelines recommended above, to begin to bridge this gap in service provision.

#### **4.6 Recommendations for future research**

Different cultures can be investigated via an etic or an emic approach. With an etic approach, which has been the more common method of investigation, one culture is investigated from the perspective of another culture. Most etic research has started from a Western perspective originating in the U.K. or U.S., attempting to investigate cross-cultural patterns of psychopathology (e.g. Marsella, 1987; Leff, 1990). In contrast, emic research, the preferred method adopted by medical anthropologists, is conducted from within a specific culture, using the perspective of that culture (e.g. Littlewood, 1990). The current study adopted an etic research approach, i.e. adapting a measure developed from Western concepts and norms, for use with a non-Western cultural group. As can be seen from the previous section of this discussion, this type of research has valid and useful clinical implications. Following on from the current study, further work on scale equivalence is indicated, in addition to much further validation work on larger samples. However, little, if any research from an emic perspective has been conducted on postnatal distress within the Bengali cultural group. Thus, little empirical or theoretical information regarding depression specifically within the Bengali culture is available. In view of this, further research is indicated in the form of ethnographic investigation of postnatal practices, conceptualisation of distress, experience and expression of distress and the cultural response to such distress within Bengali culture. Ethnographic investigation of this nature will yield information that can culturally inform the development of measures that may then be used for cross-cultural comparison. This is particularly important for the attainment of criterion and conceptual equivalence. Although it is not

expected that completely 'culture-free' scales can be developed, it would be possible to shift away from inappropriate use of 'culture-specific' instruments.



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# **APPENDICES**



**CAMDEN & ISLINGTON**  
Community Health Services NHS Trust

*Your Partner for Health*

## **LOCAL RESEARCH ETHICS COMMITTEE**

Medical Directorate, Vezey Strong Building, 112 Hampstead Road, London NW1 2LT

Tel: 0171 530 3055 Fax: 0171 530 3018

e-mail: sue.rodmeil@dial.pipex.com

22 January, 1998

Ms Fedousi Khan  
Clinical Psychologist  
47 The Avenue  
Hatch End  
Middlx HA5 4EL

Dear Ms Khan

**Application No: 97/111**

**Title: A pilot of screening for Postnatal Depression in Bengali Mothers**

Thank you for your letter dated 14 November 1997 with a copy of the amended Patient Information Sheet in response to the points raised by the Committee regarding the above study. I am pleased to inform you that there are no further ethical objections to your proposed study and the Committee can give its approval.

Please note that the following conditions of approval apply:

- ♦ It is the responsibility of the investigators to ensure that all associated staff including nursing staff are informed of research projects and are told that they have the approval of the Ethics Committee.
- ♦ If data are to be stored on a computer in such a way as to make it possible to identify individuals then the project must be registered under the Data Protection Act 1984. Please consult your department data protection officer for advice.
- ♦ The Committee must receive immediate notification of any adverse or unforeseen circumstances arising out of the trial.
- ♦ The Committee must receive notification: a) when the study is complete; b) if it fails to start or is abandoned; c) if the investigator/s change and d) if any amendments to the study are made.
- ♦ The Committee will request details of the progress of the research project periodically (i.e. annually), and require a copy of the report on completion of the project.

Fedousi Khan  
22 January, 1998  
page 2

Please forward any additional information/amendments regarding your study to Mary Anne Tourette, Administrator of LREC, at the above address. If you have any queries, please do not hesitate to contact me.

With best wishes.

Yours sincerely



pp. Stephanie Ellis  
CHAIR

**PARTICIPANT INFORMATION SHEET** Appendix 2  
A Pilot Study of Screening for Postnatal Depression in Bengali Mothers

Dr Peter Fuggle  
Ferdousi Khan  
National Temperance Hospital

Some women experience considerable psychological distress during the months after the birth of a new baby. However it is not known to what extent Bengali women are affected in this way.

In Britain and some other countries, a measure called The Edinburgh Postnatal Depression Scale (EPDS) is widely used to find out how women are feeling after having a baby. The EPDS is a 10 item self-report scale which takes 5-10 minutes to complete. Each item consists of a statement of feelings and a choice of four responses. Mothers are required to choose the response that comes closest to their feelings during the past week.

The aim of this study is to investigate whether the EPDS can also be used to assess the level of psychological distress experienced by Bengali women after having a baby.

Information gained from this study may later help to improve postnatal services for Bengali women.

If you choose to take part in this study, you will be interviewed at home by Ferdousi Khan, a Bengali/Sylheti speaking health professional. The interview will take up to one hour.

Thank you for your co operation.

If you require further information about this study, you may contact :-

Ferdousi Khan

Sub-department of Clinical Health Psychology

University College London

1-19 Torrington Place

London WC1E 6BT

0181-428-5968

Whilst there is very little risk, occasionally some distress may be experienced when completing questionnaires. If this occurs, a health professional will be available to provide immediate support, and the investigator will discuss with her supervisor whether any further support should be offered. If further support is thought to be appropriate, a referral will be made to an appropriate health professional with the consent of the participant.

You do not have to take part in this study if you do not want to. If you decide to take part you may withdraw at any time without having to give a reason. Your decision whether to take part or not will not affect your care and management in any way.

All proposals for research using human subjects are reviewed by an ethics committee before they can proceed. This proposal was reviewed by the Camden and Islington Community Health Services NHS Trust, Local Research Ethics Committee.

**Participant confidentiality will be maintained at all times before, during and after the study.**

অংশ গ্রহনকারীর তথ্য শিখরনী

বাঙ্গালী মায়েদের প্রসবস্তোর অবসাদ/ ক্রেশ বিষয়ক একটি গবেষণা প্রকল্প

ডঃ পিটার ফাগল

ফেরদৌসী খান

ন্যাশনাল টেমপোরেল হাসপাতাল

এমন অনেক মহিলা আছেন যারা নবজাত শিশু জন্মাদানের পরবর্তী কয়েক মাসব্যাপী বেশ কিছু মনস্তাত্ত্বিক ক্রেশ বোধ করে থাকেন। তবে ডুজ্জভোগী বাঙ্গালী মহিলাদের সম্বন্ধে সঠিক তথ্য তেমন জানা নেই। বৃটেনে ও অন্যান্য কয়েকটি দেশে “দি এডিনবার্গ পোস্টন্যেটাল ডিপ্রেসন স্ক্রেন” (ই পি ডি এস) পদ্ধতিতে প্রসূতি মহিলাদের অনুভূতি যাচাইয়ের প্রয়াশ বেশ প্রসার লাভ করেছে।

১০টি বিষয়বস্ত ভিত্তিক আত্ম বর্ণনামূলক প্রতিবেদনটি পূরণ করতে অংশ গ্রহনকারীর পাঁচ থেকে দশ মিনিট সময় লেগে থাকে। প্রতিটি বিষয়ের উত্তর হিসাবে ৪ ধরনের অনুভূতির উল্লেখ থাকে। তার মধ্যে থেকে পছন্দসই জবাবটি বাচাই করতে হয়। প্রসূতি মাতার গত সপ্তাহের অনুভূতির/উপলব্ধির সংগে যে জবাবটি খুব বেশী সম্পৃক্ত তা নির্বাচন করতে হয়।

সন্ধান গ্রহণের পর বাঙ্গালী মায়েদের মনস্তাত্ত্বিক অবসাদ/ক্রেশ নিরূপনে ই পি ডি এস কার্যকর কিনা তা অনুসন্ধানের প্রয়াশই এই গবেষণা কর্মের লক্ষ্য। গবেষণালব্ধ তথ্য পরবর্তীতে বাঙ্গালী মায়েদের প্রসবোত্তর স্বাস্থ্য সেবা উন্নয়নে সহায়ক হতে পারে। আপনি যদি এই গবেষণা কর্মে অংশ গ্রহনের ইচ্ছুক হন তবে বাংলা ও সিঙ্গেলী ভাষায় অভ্যস্থ স্বাস্থ্য পেশাজীবী ফেরদৌসী খান আপনার বাড়ী গিয়ে সাক্ষাৎকার গ্রহন করবেন। সাক্ষাৎকারটি ঘন্টা খানেক সময় নেবে। আপনার সহযোগীতার জন্য ধন্যবাদ।

ফেরদৌসী খান

সাব ডিপার্টমেন্ট অব ক্লিনিকেল হেলথ সাইকোলোগী

ইউনিভার্সিটি কলেজ লন্ডন

১-১৯ টরিংটন প্রেস

লন্ডন ডাবলিট সি আই

ই-৬ বিটি

ফোনঃ- ০১৮১-৪২৮-৫৯৬৮



**PARTICIPANT CONSENT FORM**

Title of Study : A Pilot Study of Screening for Postnatal Depression in Bengali Mothers

Investigators Name : Ferdousi Khan

- | To be completed by the participant                                                                                                                                   | Delete as necessary |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| 1. I have read the information sheet about this study / The information sheet has been read and explained to me                                                      | YES/NO              |
| 2. I have had an opportunity to ask questions and discuss this study                                                                                                 | YES/NO              |
| 3. I have received satisfactory answers to all my questions                                                                                                          | YES/NO              |
| 4. I have received sufficient information about the study                                                                                                            | YES/NO              |
| 5. Whom have you spoken to about this study?                                                                                                                         |                     |
| 6. I understand that I am free to withdraw from this study:-<br>*at any time<br>*without giving a reason for withdrawing<br>*without affecting my future health care | YES/NO              |
| 7. Do you agree to take part in this study?                                                                                                                          | YES/NO              |

Signed.....Date.....

Name in Block Letters

Investigator's signature.....Date.....

**N.B.** Bengali translation of form will be given to Bengali participants

অংশ গ্রহনকারীর সম্মতি পত্র

গবেষণা কর্মের বিষয় : বাঙ্গালী মেয়েদের প্রসূতি পরবর্তী মানসিক অবসাদ  
 যন্ত্রণা সম্মুখে নমুনা অনুসন্ধান প্রকল্প  
 গবেষক : ফেরদৌসী খান

নিম্নোক্ত অংশগ্রহনকারী পূরণ করবেন	অপ্রয়োজনীয় অংশ বাদ দিন
১। তথ্য বিবরণীটি আমি পড়েছি	হাঁ/ না
২। এই গবেষণা কর্ম সংশ্লিষ্ট প্রশ্ন ও জিজ্ঞাসা আলোচনা করার সুযোগ পেয়েছি	হাঁ/ না
৩। আমি সকল প্রশ্ন ও জিজ্ঞাসার সন্তোষজনক উত্তর পেয়েছি	হাঁ/ না
৪। এই গবেষণা কর্ম সম্পর্কে যথেষ্ট তথ্য আমি পেয়েছি।	হাঁ/ না
৫। এই প্রসঙ্গে আপনি কারো সংগে আলাপ করেছেন ?	হাঁ/ না
৬। এই গবেষণা কর্মে অংশ গ্রহনের ব্যাপারে আমি আমার সম্মতি প্রত্যাহার করতে পারি। * যে কোন সময় * প্রত্যাহারের কোন কারণ না দর্শিয়ে * আমার ভবিষ্যৎ স্বাস্থ্য সেবায় বিরূপ প্রভাব পড়বে না।	
৭। আপনি কি এই গবেষণা কর্মে অংশ গ্রহন করতে ইচ্ছুক ?	হাঁ/ না

স্বাক্ষরিত -----

তারিখ -----

নাম ছাপার অক্ষরে -----106

অনুসন্ধান কারীর স্বাক্ষর -----

তারিখ -----

### *Edinburgh Postnatal Depression Scale*

Today's date ..... Baby's age .....

Baby's date of birth ..... Birth weight .....

Triplets/twins/single ..... Male/female .....

Mother's age.....

Number of other children: 0 1 2 3 4 5 5 +

---

#### *HOW ARE YOU FEELING?*

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

Here is an example, already completed:

I have felt happy:

Yes, most of the time

Yes, some of the time

No, not very often

No, not at all

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

#### IN THE PAST SEVEN DAYS

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

As much as I always could

Not quite so much now

Definitely not so much now

Not at all

2. I have looked forward with enjoyment to things:

As much as I ever did

Rather less than I used to

Definitely less 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

Please continue overleaf

*The EPDS*

4. I have felt worried and anxious for no very good reason:  
No, not at all  
Hardly ever  
Yes, sometimes  
Yes, very often
5. I have felt scared or panicky for no very good reason:  
Yes, quite a lot  
Yes, sometimes  
No, not much  
No, not at all
6. Things have been getting on top of me:  
Yes, most of the time I haven't been able to cope at all  
Yes, sometimes I haven't been coping as well as usual  
No, most of the time I have coped quite well  
No, I have been coping as well as ever
7. I have been so unhappy that I have had difficulty sleeping:  
Yes, most of the time  
Yes, sometimes  
Not very often  
No, not at all
8. I have felt sad or miserable:  
Yes, most of the time  
Yes, quite often  
Not very often  
No, not at all
9. I have been so unhappy that I have been crying:  
Yes, most of the time  
Yes, quite often  
Only occasionally  
No, never
10. The thought of harming myself has occurred to me:  
Yes, quite often  
Sometimes  
Hardly ever  
Never

(Cox, J. L., Holden, J. M. & Sagovsky, R. (1987) Detection of postnatal depression: development of the 10 item Edinburgh Postnatal Depression Scale. *British Journal of Psychiatry*, 150, 782-786.)

## এডিনবরা পোস্টন্যাটেল ডিপ্রেসন মাত্রা

আজকের তারিখ : ..... শিশুর বয়স : .....

শিশুর জন্মের তারিখ : ..... জন্মকালে ওজন .....

ত্রিমজ ট্রেপলেট, যমজ/একক : ..... ছেলে/মেয়ে .....

মায়ের বয়স : ..... ।

### আপনার কেমন লাগতেছে ?

যেহেতু গত কিছু দিন আগে আপনার একটি শিশু জন্ম নিয়াছে আমরা জানতে চাই আপনার এখন কেমন লাগছে । দয়া করে উত্তর গুলোর মধ্যে যেটা গত সাত দিনের মধ্যে (শুধু আজকের নয়) আপনার মানের সাথে সব চাইতে বেশী মিলে সেটা একটু দাগ দিয়ে রাখবেন ।

যেমন আমরা নীচে একটি উদাহরণ দিয়েছি :-

আমার মনে খুশী লেগেছে :

হ্যাঁ, প্রায় সব সময়

হ্যাঁ, মাঝে মাঝে

না, সব সময় নয়

না, একে বারেই নয় ।

এর অর্থ হচ্ছে : “আমি খুশী ছিলাম মানো মানো” গত সাত দিন ।

(পাতা-২)

দয়া করে বাকি সব প্রশ্নগুলো এইভাবে পূরণ করে নেন।

গত সাত দিনেঃ-

১। আমি হাসতে পেরেছি এবং কোন জিনিসের হাস্যময় দিকটা লক্ষ্য করছি :

আগে যেমন পারতাম সে রকম  
এখন খুব বেশী নয়  
একেবারেই আগের মত নয়  
মোটাই নয়।

২। আমি কোন কিছুর জন্যে আত্মহের সহিত অপেক্ষা করেছি :

আগে যেভাবে করতাম  
আগের থেকে কিছু কম  
অবশ্যই আগের থেকে কম  
খুবই কম।

৩। আমি অযথা আমার নিজেকে দোষ দিয়েছি কখন কিছু ভুল হয়েছে :

হ্যাঁ, প্রায় সব সময়  
হ্যাঁ, প্রায় মারো মারো  
না, প্রায় সময় নয়  
না, কখনও নয়।

(পাতা -৩)

৪। আমি চিন্তিত এবং অস্থির হয়ে পড়েছিলাম বিশেষ কোন কারণ ছাড়া :

না, একেবারেই নয়  
খুবই কম  
হ্যাঁ, মাঝে মাঝে  
হ্যাঁ, প্রায় সময়।

৫। বিশেষ কোন কারণ ছাড়া আমার ভয় লেগেছিল অথবা ভিযন অস্থির হয়ে পড়েছিলাম :

হ্যাঁ, অনেক বেশী  
হ্যাঁ, মাঝে মাঝে  
না, বেশী নয়  
না, মোটেও নয়।

৬। সব কিছু যেন আমার উপর বোঝা হয়ে পড়েছে :

হ্যাঁ, বেশীর ভাগ সময় আমি সামলাইয়া নিতে পারি না।  
হ্যাঁ, মাঝে মাঝে আমি আগের মত সামলাইতে পারি না।  
না, প্রায় বেশীর ভাগ সময় আমি সামলাইয়া নিতে পেরেছি।  
না, আমি এখন আগের মত সব কিছু সামলাইয়া নিতে পারি।

(পাতা-৪)

৭। আমি এতই অখুশী ছিলাম বলে আমার ঘুমাতে কষ্ট হয়েছে :

হ্যাঁ, প্রায় সব সময়।

হ্যাঁ, মারো মারো

না, প্রায় সময় নয়

না, মোটেও নয়।

৮। আমি দুঃখিত ছিলাম এবং মনের গতি খারাপ ছিল :

হ্যাঁ, প্রায় সব সময়

হ্যাঁ, মারো মারো

না, প্রায় সময় নয়

না, মোটেও নয়।

৯। আমি এতই অখুশী ছিলাম বলে আমি কেঁদেছি :

হ্যাঁ, প্রায় সব সময়

হ্যাঁ, প্রায় সময়

না, প্রায় সময় নয়

না, একেবারেই নয়।

১০। আমার নিজেকে ব্যাথা দেওয়ার কথা মনে জেগেছিল :

হ্যাঁ, প্রায় সময়

হ্যাঁ, মারো মারো

না, খুবই কম

না, মোটেও নয়।



**Edinburgh Postnatal Depression Scale**

Today's date.....	Baby's age.....
Baby's date of birth.....	Birth weight.....
Triplets/twins/single.....	Male/female.....
Mother's age.....	

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*HOW ARE YOU FEELING?*

Since you have recently given birth to a baby, we would like to know how you are feeling now. Could you please mark the answer which is most appropriate for your feelings in the last seven days, not just for today.

For example, the way we have shown below:

I was feeling happy :  
Yes, most of the time  
Yes, sometimes  
No, not always  
No, not at all

This means : " I was feeling happy sometimes" during the last seven days. Please answer the rest of the questions in this way.

**IN THE LAST SEVEN DAYS**

1. I was able to laugh, and I could see the funny side of things:

Like the way I used to  
Not that much now  
Not at all like before  
Not at all

2. I looked forward to things:

The way I used to do  
Less than before  
Definitely less than before  
Hardly at all

3. When something went wrong, I blamed myself for nothing:

Yes, most of the time  
Yes, sometimes  
No, not all the time  
No, never

4. I was worried and tense for no special reason:

No, not at all  
Hardly ever  
Yes, sometimes  
Yes, most of the time

5. Without any special reason, I was scared or too tense:

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

6. It seems everything is falling upon me:

Yes, most of the time I cannot cope with everything  
Yes, sometimes I can't cope as well as before  
No, most of the time I have coped  
No, I coped with things as I used to before

7. I was so unhappy that I was having difficulty sleeping:

Yes, most of the time  
Yes, sometimes  
Hardly ever  
No, not at all

8. I was unhappy or feeling low:

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

9. I was so unhappy that I cried:

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

10. The thought of hurting myself arose in my mind:

Yes, most of the time  
Sometimes  
Hardly ever  
Never

# THE GENERAL HEALTH QUESTIONNAIRE GHQ 28- David Goldberg

Please read this carefully.

We should like to know if you have had any medical complaints and how your health has been in general, over the past few weeks. Please answer ALL the questions on the following pages simply by underlining the answer which you think most nearly applies to you. Remember that we want to know about present and recent complaints, not those that you had in the past.

It is important that you try to answer ALL the questions. Thank you very much for your co-operation.

Have you recently

A1-	been feeling perfectly well and in good health?	Better than usual	Same as usual	Worse than usual	Much worse than usual
A2-	been feeling in need of a good tonic?	Not at all	No more than usual	Rather more than usual	Much more than usual
A3-	been feeling rundown and out of sorts?	Not at all	No more than usual	Rather more than usual	Much more than usual
A4-	felt that you are ill?	Not at all	No more than usual	Rather more than usual	Much more than usual
A5-	been getting any pains in your head?	Not at all	No more than usual	Rather more than usual	Much more than usual
A6-	been getting a feeling of tightness or pressure in your head?	Not at all	No more than usual	Rather more than usual	Much more than usual
A7-	been having hot or cold spells?	Not at all	No more than usual	Rather more than usual	Much more than usual
<hr/>					
B1-	lost much sleep over worry?	Not at all	No more than usual	Rather more than usual	Much more than usual
B2-	had difficulty in staying asleep	Not at all	No more than usual	Rather more than usual	Much more than usual
B3-	felt constantly under strain?	Not at all	No more than usual	Rather more than usual	Much more than usual
B4-	been getting edgy and bad-tempered?	Not at all	No more than usual	Rather more than usual	Much more than usual
B5-	been getting scared or panicky for no good reason?	Not at all	No more than usual	Rather more than usual	Much more than usual
B6-	found everything getting on top of you?	Not at all	No more than usual	Rather more than usual	Much more than usual
B7-	been feeling nervous and strung-up all the time?	Not at all	No more than usual	Rather more than usual	Much more than usual

C1-	been managing to keep yourself busy and occupied?	More so than usual	Same as usual	Rather less than usual	Much less than usual
C2-	been taking longer over the things you do?	Quicker than usual	Same as usual	Longer than usual	Much longer than usual
C3-	felt on the whole you were doing things well?	Better than usual	About the same	Less well than usual	Much less well
C4-	been satisfied with the way you've carried out your task?	More satisfied	About the same as usual	Less satisfied than usual	Much less satisfied
C5-	felt that you are playing a useful part in things?	More so than usual	Same as usual	Less useful than usual	Much less useful
C6-	felt capable of making decisions about things?	More so than usual	Same as usual	Less so than usual	Much less capable
C7-	been able to enjoy your normal day-to-day activities?	More so than usual	Same as usual	Less so than usual	Much less than usual
D1-	been thinking of yourself as a worthless person?	Not at all	No more than usual	Rather more than usual	Much more than usual
D2-	felt that life is entirely hopeless?	Not at all	No more than usual	Rather more than usual	Much more than usual
D3-	felt that life isn't worth living?	Not at all	No more than usual	Rather more than usual	Much more than usual
D4-	thought of the possibility that you might make away with yourself?	Definitely not	I don't think so	Has crossed my mind	Definitely have
D5-	found at times you couldn't do anything because your nerves were too bad?	Not at all	No more than usual	Rather more than usual	Much more than usual
D6-	found yourself wishing you were dead and away from it all?	Not at all	No more than usual	Rather more than usual	Much more than usual
D7-	found that the idea of taking your own life kept coming into your mind?	Definitely not	I don't think so	Has crossed my mind	Definitely has

A  B  C  D  TOTAL

# “সাধারণ স্বাস্থ্য বিষয়ক প্রশ্নাবলী”

“দি জেনারেল হেলথ  
বেগিয়াশচয়নার”

“অনুগ্রহ পূর্বক সতর্কতার সহিত পড়ুন”

আমি জানতে আগ্রহী, যদি আপনার কোন ডাক্তারী সমস্যা থেকে থাকে, বিগত কয়েক সপ্তাহ আপনার শারীরিক অবস্থা স্বাভাবিক আছে কি-না, অনুগ্রহপূর্বক সবগুলো প্রশ্নের উত্তর দিবেন প্রদত্ত পাতায়, আপনি যেটা মনে করেন ঠিক উত্তর আপনার নিজের জন্য, সেটাতে দাগ দিবেন। মনে রাখা উচিত, আমরা জানতে চাই আপনার এখনকার সমস্যাগুলো। ঐ গুলো নয়, যে সমস্যাগুলো আপনার অতীতে ছিল। ইহা অত্যন্ত জরুরী যে, আপনি চেষ্টা করবেন সবগুলো প্রশ্নের উত্তর দেওয়ার।

আপনার সহযোগিতার জন্য অশেষ ধন্যবাদ।

- এ১ পুরোপুরি ভাগ ও সুন্দর স্বাস্থ্যবোধ করছেন স্বাভাবিকের চেয়ে ভাগ স্বাভাবিকের চেয়ে খারাপ স্বাভাবিকের চেয়ে বেশী খারাপ
- এ২ ভাগ ঐযথ সেবন দরকার মনে করেন মোটেই না স্বাভাবিকের চেয়ে বেশী স্বাভাবিকের চেয়ে অনেক বেশী
- এ৩ খুব ভাগ না খুব খারাপও না মনে করেন মোটেই না স্বাভাবিকের চেয়ে বেশী স্বাভাবিকের চেয়ে অনেক বেশী
- এ৪ মনে করেন যে আপনি অসুস্থ মোটেই না স্বাভাবিকের চেয়ে বেশী স্বাভাবিকের চেয়ে অনেক বেশী
- এ৫ আপনার মাথায় ব্যথা অনুভব করেন মোটেই না স্বাভাবিকের চেয়ে বেশী স্বাভাবিকের চেয়ে অনেক বেশী
- এ৬ আপনার মাথায় শক্ত শক্ত ভাব বা চাপ অনুভব করেন মোটেই না স্বাভাবিকের চেয়ে বেশী স্বাভাবিকের চেয়ে অনেক বেশী
- এ৭ মাঝে মাঝে ঠান্ডা বা গরম অনুভব করেন মোটেই না স্বাভাবিকের চেয়ে বেশী স্বাভাবিকের চেয়ে অনেক বেশী
- 
- বি১ বেশী দুঃচিন্তার জন্য ঘুম কম হয় মোটেই না স্বাভাবিকের চেয়ে বেশী স্বাভাবিকের চেয়ে অনেক বেশী
- বি২ আপনার কি এখন ঘুমুতে গেলে মাঝে মাঝে ঘুম ভেঙে যায় মোটেই না স্বাভাবিকের চেয়ে বেশী স্বাভাবিকের চেয়ে অনেক বেশী
- বি৩ সব সময় কোন না কোন সমস্যা বোধ করেন মোটেই না স্বাভাবিকের চেয়ে বেশী স্বাভাবিকের চেয়ে অনেক বেশী
- বি৪ কর্কশ মেজাজ কিংবা বিরক্তিকর ভাব বোধ করেন মোটেই না স্বাভাবিকের চেয়ে বেশী স্বাভাবিকের চেয়ে অনেক বেশী
- বি৫ ভয় ভয় বা অস্থিরতা বোধ করেন বিশেষ কোন কারণ ছাড়া মোটেই না স্বাভাবিকের চেয়ে বেশী স্বাভাবিকের চেয়ে অনেক বেশী

বি৬ সব সমস্যাই আপনার নিজের উপর বোঝা হয়ে পড়ছে মনে করেন স্বাভাবিকের চেয়ে বেশী না স্বাভাবিকের চেয়ে বেশী স্বাভাবিকের চেয়ে অনেক বেশী

বি৭ সব সময় কর্কশ মেজাজ ও ঘাবড়ে যাওয়ার মতে ভাব অনুভব করেন স্বাভাবিকের চেয়ে বেশী না স্বাভাবিকের চেয়ে বেশী স্বাভাবিকের চেয়ে অনেক বেশী

সি১ নিজেকে এখন ব্যস্ত রাখতে মনোযোগী আগে মতো স্বাভাবিক স্বাভাবিকের চেয়ে বেশী স্বাভাবিকের চেয়ে কম স্বাভাবিকের চেয়ে অনেক কম

সি২ কোন কাজে আগের চেয়ে বেশী সময় লাগান স্বাভাবিকের চেয়ে কম সময়ে আগের মতো স্বাভাবিক স্বাভাবিকের চেয়ে বেশী সময়ে স্বাভাবিকের চেয়ে অনেক বেশী সময়ে

সি৩ মনে করেন সব কাজ ভালভাবে করতেন আগে মতো স্বাভাবিক আগে মতো স্বাভাবিক স্বাভাবিকের চেয়ে অনেক খারাপ

সি৪ আপনার নিজের কাজের জন্য সন্তুষ্টি বোধ করেন খুবই সন্তুষ্ট আগে মতো স্বাভাবিক প্রায় স্বাভাবিকের চেয়ে কম সন্তুষ্ট স্বাভাবিকের চেয়ে অনেক কম সন্তুষ্ট

সি৫ মনে করছেন আপনি যা করছেন তা উপকারী আগের মতো স্বাভাবিক স্বাভাবিকের চেয়ে কম উপকারী স্বাভাবিকের চেয়ে অনেক কম উপকারী

সি৬ কোন জিনিষের সিদ্ধান্ত নিতে সক্ষম আগের মতো স্বাভাবিক স্বাভাবিকের চেয়ে কম আগের চেয়ে অনেক কম

সি৭ দিন দিন আপনার স্বাভাবিক কাজকর্মে আনন্দবোধ করেন আগে মতো স্বাভাবিক স্বাভাবিকের চেয়ে কম স্বাভাবিকের চেয়ে অনেক কম

ডি১ আপনি নিজেকে চিন্তা করেন একজন মূল্যহীন মানুষ স্বাভাবিকের চেয়ে বেশী না স্বাভাবিকের চেয়ে বেশী স্বাভাবিকের চেয়ে অনেক বেশী

ডি২ মনে করেন জীবনটা একেবারে আশাহীন স্বাভাবিকের চেয়ে বেশী না স্বাভাবিকের চেয়ে বেশী স্বাভাবিকের চেয়ে অনেক বেশী

ডি৩ মনে করেন জীবনে বেটে থাকার কোন মূল্য নেই স্বাভাবিকের চেয়ে বেশী না স্বাভাবিকের চেয়ে বেশী স্বাভাবিকের চেয়ে অনেক বেশী

- ডি৪ মনে করেন নিজেই নিজাকে অবশ্যই না অবশ্যই মানে করেন  
ধাংশ করে দিবেন
- ডি৫ কোন সময় মনে করেন মোটেই না স্বাভাবিকের চেয়ে বেশী না স্বাভাবিকের চেয়ে অনেক বেশী  
যে আপনি কিছুই করতে পারবেন না, কারণ আপনার চিন্তা শক্তি খুব খারাপ
- ডি৬ মনে করেন সব কিছু ছেড়ে মোটেই না স্বাভাবিকের চেয়ে বেশী না স্বাভাবিকের চেয়ে অনেক বেশী  
মরে গেলে ভাল হয়
- ডি৭ নিজাকে আত্মহত্যা করার মোটেই না স্বাভাবিকের চেয়ে বেশী না স্বাভাবিকের চেয়ে অনেক বেশী  
কথা মনে হয়



**SEMI-STRUCTURED INTERVIEW SCHEDULE**

**Demographic details**

Mother's Age:.....Generation:.....Baby's age:.....

No. of years in U.K.....

No. of years in full-time education:.....Education in U.K:.....

Spoken dialect:.....Mono/Bilingual:.....

Husband's occupation:.....

Family composition:.....No. of people in household:.....

No. of other children:.....

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The aim of the interview is to obtain information regarding social support. All areas must be addressed, though not in any specific order. The interview should be kept informal, and the following should be used as a guide only.

Introduction – What I am interested in finding out from you is how you have been feeling recently, and what kind of support you have had from family or friends since the birth of your baby.

**Practical Support**

Is there anyone that helps you directly in the care of your baby?

If so, who?

What, if any, other help do you get from family or friends since the birth of your baby

e.g. with household chores.

Emotional support

If you want to talk to someone about your everyday experiences, is there anyone you can talk to? If so, who?

If you want to talk to someone about your private feelings, is there anyone you can talk to? If so, who?

Have you recently had enough opportunity to talk about your private and personal feelings?

Support from Husband

Do you feel that your husband helps you with the baby or household chores?

Do you feel you can talk to your husband about everyday aspects of your day?

Are you able to talk to your husband about private feelings?

Other Problems/Worries

Do you have any other problems or concerns that may be affecting the way you are currently feeling?

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Exploration of Feelings and Level of Distress (for cases)

How have you been feeling recently?

How long do you think you have been feeling this way?

What thoughts do you have about why you might be experiencing these symptoms?

What do you do if you are feeling very distressed?

Is there anything that makes you feel better/worse?

Can you think of anything that might help you feel better?