RUJUKAN

LAPURAN AKHIR

STUDY OF POSTNATAL DEPRESSION IN KOTA BHARU AND VALIDATION OF EDINBURGH POSTNATAL DEPRESSION SCALE

DR. SHAIFUL BAHARI ISMAIL (PENYELIDIK UTAMA)
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DR. RANJIT KAUR
DR. HAMZAH MAT

USM R&D/JP-04

LAPORAN AKHIR PROJEK PENYELIDIKAN R&D JANGKA PENDEK

A. MAKLUMAT AM

Tajuk Projek: STUDY OF POSTNATAL DEPRESSION IN KOTA BHARU KELANTAN AND VALIDATION OF EDINBURGH POSTNATAL DEPRESSION

SCALE

Tajuk Program: _____

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Tarikh Mula: 01/06/2000

Nama Penyelidik Utama: DR. SHAIFUL BAHARI ISMAIL (670811035489)
(berserta No. K/P)

Nama Penyelidik Lain: PROF. RUSLI NORDIN, DR. M. JAMIL YAAKOB, DR. WAN RUSHIDI W. MAHMUD, DR. AZIDAH ABD. KADIR
(berserta No. K/P)

B. PENCAPAIAN PROJEK:

(Sila tandakan [/] pada kotak yang bersesuaian dan terangkan secara ringkas di dalam ruang di bawah ini. Sekiranya perlu, sila gunakan kertas yang berasingan)

☐ Penemuan asli/peningkatan pengetahuan

1. THE MALAY VERSION OF EPDS IS VALID AND RELIABLE SCREENING TOOL FOR POSTNATAL DEPRESSION

2. THE PREVALENS OF POSTNATAL DEPRESSION AT 4-6 WEEKS POSTPARTUM, BASED ON EPDS SCORE OF 12 OR ABOVE WAS 20.7%

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☐ **Rekaan atau perkembangan produk baru,**
(_Sila beri penjelasan/makluman agar mudah dikomputerkan_)

(1) ___VALIDATION OF EDINBURGH POSTNATAL DEPRESSION SCALE

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☐ **Mengembangkan proses atau teknik baru,**
(_Sila beri penjelasan/makluman agar mudah dikomputerkan_)

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☐ **Memperbaiki/meningkatkan produk/proses/teknik yang sedia ada**
(Sila beri penjelasan/makluman agar mudah dikomputerkan)

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C. PEMINDAHAN TEKNOLOGI

☐ Berjaya memindahkan teknologi.

Nama Klien: (1) _____
(Nyatakan nama
penerima pemindahan teknologi
ini dan sama ada daripada   (2) _____
pihak swasta ataupun sektor
awam)
                                      (3) _____

☐ Berpotensi untuk pemindahan teknologi.
(Nyatakan jenis klien yang mungkin berminat)

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(3) _____

G. **PENERBITAN HASIL DARIPADA PROJEK**

(i) **LAPORAN/KERTAS PERSIDANGAN ATAU SEMINAR**

(1) ____Pembentangan kertas kerja (preliminary data) di O&G Scientific Meeting, Sunway Lagoon Resort Hotel, June 2000- Memenangi Best Overall Paper (U Bucholtz Award)

_____

(2) ____Pembentangan kertas kerja di Family Physician Teaching Course, Hospital Lam Wah Ee, Pulau Pinang, September 2000 – Memenangi Best Overall Paper

_____

(3) ____Pembentangan kertas kerja di Public Health Kolokium, Mac 2001 ____

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(4) _____

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(ii) **PENERBITAN SAINTIFIK**

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D. KOMERSIALISASI

☐ Berjaya dikomersialkan.

Nama Klien: (1) _____

      (2) _____

      (3) _____

☐ Berpotensi untuk dikomersialkan.
 (Nyatakan jenis klien yang mungkin berminat)

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E. PERKHIDMATAN PERUNDINGAN BERBANGKIT DARIPADA PROJEK
(Klien dan jenis perundingan)

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(2) _____

(3) _____

(4) _____

F. PATEN/SIJIL INOVASI UTILITI
(Nyatakan nombor dan tarikh pendaftaran paten. Sekiranya paten/sijil inovasi utiliti telah dipohon tetapi masih belum didaftarkan, sila berikan nombor dan tarikh fail paten).

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(2) _____

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(5) _____

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(6) _____

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H. HUBUNGAN DENGAN PENYELIDIK LAIN
(sama ada dengan institusi tempatan ataupun di luar negara)

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(4) _____

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I. SUMBANGAN KEWANGAN DARI PIHAK LUAR
(Nyatakan nama agensi dan nilai atau peralatan yang telah diberi)

(1) _____

(2) _____

(3) _____

J. PELAJAR IJAZAH LANJUTAN
(Nyatakan jumlah yang telah dilatih di dalam bidang berkaitan dan sama ada diperingkat sarjana atau Ph.D).

Nama Pelajar

Sarjana   Dr. Azidah Abd. Kadir _____

_____

_____

Ph.D   _____

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K. MAKLUMAT LAIN YANG BERKAITAN

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14/07/01
Tarikh

Tandatangan

**TANDATANGAN PENGERUSI
JAWATANKUASA PENYELIDIKAN
PUSAT PENGAJIAN**

PROF. MADYA ZABIDI AZHAR MOHD. HUSSIN
Dekan
Pusat Pengajian Sains Perubatan
Universiti Sains Malaysia
16150 Kubang Kerian,
Kelantan.

PROF. MADYA ZABIDI AZHAR MOHD. HUSSIN
Dekan
Pusat Pengajian Sains Perubatan
Universiti Sains Malaysia
16150 Kubang Kerian,
Kelantan.

Semua laporan kemajuan dan laporan akhir yang dikemukakan kepada Bahagian Penyelidikan dan Pembangunan perlu terlebih dahulu disampaikan untuk penelitian dan perakuan Jawatankuasa Penyelidikan di Pusat Pengajian.

USM JP-06

BAHAGIAN PENYELIDIKAN
UNIVERSITI SAINS MALAYSIA

Laporan Akhir Projek Penyelidikan Jangka Pendek

1) **Nama Penyelidik:** __Dr. Shaiful Bahari Ismail__

   Nama Penyelidik-Penyelidik Lain: **Prof. Rusli Nordin**
   (*Jika berkaitan*)   **Dr. M. Jamil Yaakob**

   Dr. W. Rushidi W. Mahmud
   Dr. Azidah Abd. Kadir

   Dr. Ranjit Kaur
   Dr. Hamzah Mat

2) **Pusat Pengajian/Pusat/Unit:** Unit Perubatan Keluarga, Pusat Pengajian Sains Perubatan

3) **Tajuk Projek:** ____Study of Postnatal Depression in Kota Bharu, Kelantan____ and Validation of Postnatal Depression Scale

4. (a) Penemuan Projek/Abstrak

Objektif : Melakukan kajian Validasi kepada Edinburgh Postnatal depression scale (EPDS) versi melayu bagi menentukan prevalens kemurungan ibu-ibu selepas bersalin dan faktor-faktor risiko. Selain itu, kita juga melihat amalan tradisional termasuk pantang larang selepas bersalin di kalangan wanita di Kota Bharu, Kelantan.

Metodologi : Peringkat permulaan, kajian validasi melibatkan 52 ibu-ibu baru bersalin (4-12 minggu). Ibu-ibu tersebut diberkan EPDS dan 30 soalan GHQ (General Health Questionnaires). Seterusnya mereka dinilai menggunakan Hamiltin Depression Rating Scale (HDRS) dan Clinical Interview Schedule (CIS). Diagnosis seterusnya dibuat menggunakan criteria ICD-10. Kajian seterusnya melibatkan 417 ibu-ibu yang menjalani pemeriksaan di Klinik-klinik kesihatan yang telah dipilih secara rawak di Daerah Kota Bharu dan dengan menggunakan EPDS mereka telah disaring untuk mengesan masalah kemurungan pada akhir kehamilan, 36-42minggu, 1 minggu dan 4-6 minggu selepas bersalin. Mereka juga dikehendaki melengkapkan soalan berkaitan dengan sosio-dermografi, sokongan psikososial dan amalan tradisional selepas bersalin.

Keputusan : Kajian validasi keatas EPDS versi Melayu menunjukkan skor terbaik yang dicapai ialah 11.5 dengan 72.7% sensitiviti dan 92.6% spesifisiti. Didalam kajian seterusnya, seramai 377 wanita melengkapkan soalan-soalan yang diberi dan EPDS (kadar respons=90.4%). Didapati prevalens kemurungan dikalangan wanita-wanita baru bersalin pada 4-6 minggu, ialah sebanyak 20.7%. Beberapa faktor yang berkaitan dengan masalah ini termasuklah simptom kemurungan diakhir peringkat kehamilan (p<0.05), 1 minggu selepas bersalin (p<0.05), bimbang terhadap bayi (p<0.05), menggunakan ubat-ubatan tradisional (p<0.05) dan mengamalkan mengurut secara tradisional (p<0.05).

Konklusi : EPDS versi Melayu adalah valid dan boleh digunakan sebagai alat untuk menyaring masalah kemurungan dikalangan wanita baru bersalin. Masalah kemurungan dikalangan wanita baru bersalin di Daerah Kota Bharu adalah lebih tinggi berbanding dengan beberapa siri kajian awal di seluruh Malaysia. Beberapa faktor telah dikenalpasti berkaitrapat dengan masalah ini termasuklah simptom kemurungan diakhir kehamilan dan diperingkat awal selepas bersalin, bimbang terhadap bayi dan menggunakan ubat-ubatan tradisional. Walaubagaimanapun, didapati amalan mengurut secara tradisional boleh menjadi faktor pelindung terhadap masalah ini.

A STUDY OF POSTNATAL DEPRESSION IN KOTA BHARU, KELANTAN.

Objective : Validation of the Malay version of the Edinburgh Postnatal Depression Scale to determined the prevalence of postnatal depression, its risk factors and a survey of socio-cultural practices post delivery among women in District of Kota Bharu, Kelantan delivering between February to September 2000.

Material and method : Initially, a validation study was done involving 52 mothers who were at 4-12 week post delivery. The woman completed the Malay. version of EPDS and the Malay 30-item General Health Questionnaire (GHO). The were they assessed with the Hamilton Depression Rating Scale (HDRS) and Clinical Interview Schedule (CIS). Psychiatric diagnoses were made based on ICD-10 criteria. The validity of EPDS was tested against this clinical diagnosis and the concurrent validity against the Malay version 30-item GHQ and HDRS scores was also was evaluated. Then a longitudinal study involving four hundred and seventeen pregnant women attending primary health care facilities in Kota Bharu between February and September 2000 were screened for depression at 36 – 42 week of pregnancy, 1 week and 4 – 6 week postpartum using EPDS. The women were also requested to complete questionnaires on socio-demography, psychosocial support and traditional postnatal care.

Results : The best cut-off score of the Malay version of EPDS was 11.5 with the sensitivity of 72.7% and specificity of 92.6%. In Longitudinal study, three hundred and seventy seven women successfully completed the questionnaires and EDPS (response rate = 90.4%). The prevalence of postnatal depression at 4 – 6 week postpartum, based on EDPS score of 12 and above, was 20.7%. Depressive symptoms at the end of pregnancy (p<0.05) and one week postpartum (p<0.05), worried about the baby (p <0.05) using traditional medication (p<0.05) and traditional massage (p<0.05) were significantly associated with postnatal depression.

Conclusion: The Malay version of EDPS is valid and reliable screening tool for Postnatal Depression. Postnatal depression among women in Kota Bharu was more common compared to previously reported series in Malaysia. Onset of depressive symptoms towards the end of pregnancy and early postpartum period, worried about the baby and using traditional medicine independently predicted postnatal depression. However, ing traditional massage seems to have a protective effect..

(b)   Senaraikan Kata Kunci yang digunakan di dalam abstrak:

<u>**Bahasa Malaysia**</u>   <u>**Bahasa Inggeris**</u>

Kemurungan _____   Postnatal depression _____

wanita baru bersalin _____   EPDS _____

factor risiko _____   risk factor _____

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5.   **Output Dan Faedah Projek**
      (a)   Penerbitan (*termasuk laporan/kertas seminar*)
      (*Sila nyatakan jenis, tajuk, pengarang, tahun terbitan dan di mana telah diterbitkan/dibentangkan*)

1. Pembentangan Kertas kerja (preliminary report) di O&G Scientific Meeting, Sunway Lagoon Resort Hotel, Kuala Lumpur, June 2000- Memenangi Best Overall Paper – U Bucholtz Award
2. Pembentangan Kertas Kerja (preliminary report) di Family Physician Teaching Course di Lam Wah Ee Hospital, September 2000 – Memenangi Best Overall Paper
3. Pembentangan kertas kerja (Analisis akhir) di Public Health Kolokium, Mac 2001

(b) **Faedah-Faedah Lain Seperti Perkembangan Produk, Prospek Komersialisasi Dan Pendaftaran Paten**
(Jika ada dan jika perlu, sila gunakan kertas berasingan)

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(c) **Latihan Gunatenaga Manusia**

i) *Pelajar Siswazah:* 1. Dr. Azidah Abd. Kadir _____

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ii) *Pelajar Prasiswazah:* _____

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iii) *Lain-lain:* _____

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6. Peralatan Yang Telah Dibeli:

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UNTUK KEGUNAAN JAWATANKUASA PENYELIDIKAN UNIVERSITI

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TANDATANGAN PENGERUSI
JAWATANKUASA PENYELIDIKAN
PUSAT PENGAJIAN
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POSTPARTUM DEPRESSION: STOPPING THE THIEF THAT STEALS MOTHERHOOD.

Introduction.

Childbirth is traditionally associated with positive emotions of joy and fulfillment for the new mother and her family. But for some women, the period following childbirth may be a time of emotional turmoil. The mood disorders which affect newly delivered women range from a relatively short but emotionally labile time, popularly called the blues, to a serious psychiatric disorder requiring specialized psychiatric treatment.

Psychiatric disorder in the puerperium could be classified into three forms:

1) Postpartum Blues

2) Postpartum psychosis

3) Postpartum depression

Most recent studies showed 10 - 15 % of women suffered from postnatal depression (Pitt 1968, Cox 1982, Kumar and Robson 1984). Although PND is 100 times more prevalent than puerperal psychosis, most go undetected. This failure of detection obviously a cause for much clinical concern.

The condition is important in that it may have long-term effects on children of such mothers, producing, for example later behavioral disturbances (Wrate et al 1985), non accidental injury is also sometimes associated with this problem (Margison & Brockington 1982).

For these reasons, there has been a substantial research effort in recent years to elucidate etiological factors, to develop methods of prediction, to refine a system for reliable detection, and to develop and evaluate methods of treatment which can delivered widely within the health service.

Mood disorders following childbirth are not confined to western society, and have been recognized worldwide and throughout history (Cox 1986). In many societies, motherhood marks a transitional period in the women's life, and provision is made for her to be treated differently, usually for a period of about six weeks. She may be excused from certain aspects of work, and may be supported and helped with childcare by other women. She may be regarded as unclean from a religious or cultural point of view, and there may be some official marking of the end of the period. .

In Malaysia and Asia at large, pregnancy and confinement are always accorded important roles and demand significant attention from families and society. It was postulated that these practices have protective effect from developing postpartum depression.

In western society, there is no well-defined period of being special for the new mothers. Society's emphasis is on normality of childbirth and the expectation that new mothers will continue with life as usual, as well as coping with the baby (Cox 1986).

Historical Background

The idea that some form of psychiatric illness might follow childbirth is not a new one. Medical personnel have known psychiatric illness following childbirth since the time of Hippocrates. He first mentioned it in the third book of his treatise *Epidemics*. He postulated that when the lochial discharge was suppressed it could be carried out towards the head and would result in agitation, delirium and an attack of mania (Cox 1993). The connection between childbirth and psychiatric disturbance was not understood but there was an obvious association observed by two French psychiatrists, Marce and Esquirol in the mid 19th century. (Kit 1997). In the 1960s, the first statistical studies into the illness were carried out. However, women displaying symptoms of postnatal depression would still have diagnosed quite simply as suffering from " nerves ". In 1968, Professor Brice Pitt (Pitt 1968) published a paper on depressive illness following delivery, and attempted for the first time to offer a separate diagnostic criteria. In the first survey of its kind, he studied approximately 365 women and measured their mood during pregnancy and then after delivery. He found the incident rate of the clinical form of depression to be about 10 %, a figure that is still used as a benchmark today.

Classification

Postpartum depressive disorders are typically divided into 3 categories:

1. Postpartum blues

2. Puerperal psychosis

3. Postpartum depression

Baby Blue

Postpartum blues occurred in an estimated 50-70% of new mothers, usually around the third postnatal day (Holden 1990). There may be a period of hypomania or excitement and irritability, followed by an intense feeling of sadness (Liddle 1996).

Stein (1982) identified two clear features of the blues: first, tearfulness, usually beginning on the third day and not persisting beyond two weeks. The second, and more severe, feature is the experience of one or more negative emotions such as irritability, confusion, anxiety and restlessness, which may be accompanied by insomnia with or without headache.

Stein suggested that women who experience the second features might go on to develop postnatal depression. The blues are characterized by their self-limiting nature, usually clearing up about two weeks postnatal. Support, reassurance and encouragement, including the mother's family and friends is usually all that is required. As Holden (1990) observed, experiencing the blues is so widespread that it could be considered normal.

Puerperal Psychosis

Puerperal psychosis has been long recognized as a serious and obvious psychiatric disorder arising in women with newly delivered babies. It is relatively rare, occurring in two to three (less than 1 percent) per 1,000 live births (Cox 1986). Most patients present within 2 weeks of delivery, some as early as 48 hours postpartum. The women may experience delusion or hallucinations. First features include sleep disturbances, restlessness and irritability.

Women with a history of puerperal psychosis, psychiatric problems, or with a family history of mental illness, are at risk of developing puerperal psychosis and may do so in the subsequent pregnancies (Liddle 1996). Suicide is a real risk and infanticide may occur in 4% of untreated cases.

Women who have had puerperal psychosis will need support in subsequent pregnancies and, in severe cases, may need antipsychotic drug therapy during pregnancy and after delivery, to prevent relapse (Liddle 1996). The risk of relapse may be as high as one in five.

Postnatal Depression

The blues and the puerperal psychosis are relatively easy to identify, but about 10 percent of newly delivered women, a period of emotional instability and turmoil may develop. This ·interferes with her enjoyment of daily life and, indeed, with every aspect of her life (Cox et al 1993). Postpartum depression has been described as a dangerous thief that, after delivery, robs a mother of precious time spent with the infant she has anticipated throughout her pregnancy.

The term postnatal depression is contended by a number of writers, who points out that postnatal, women experience a spectrum of emotions which range from euphoria to misery, yet may not clinically depressed.

Postpartum depression is defined in the DSM-IV as major depressive episodes that occur within 4 weeks of delivery. DSM- IV criteria for a major depressive episode includes a period of at least 2 weeks of depressed mood or loss of interest in almost all activities. It also include at least 4 other symptoms from the following list:

1. Changes in the appetite or weight, sleep

2. Psychomotor activities

3. Decreased energy

4. Feelings of worthlessness or guilt

5.difficult thinking, concentration or decisions

6.recurrent thought of death or suicidal ideation, plans or attempts.

Some women who develop postnatal depression will have experienced and got over the blues, while, for some, the blues does not remit and develops into depression. Timing is variable but, as Cox et al (1993) showed, the peak time is five weeks after delivery.

Characteristic symptoms of major postpartum depression

Non-psychotic depression (Deborah A. Sichel)

1. Mood labiality

2. Tearfulness

3. Irritability, hostility, most often directed at spouse or partner

4. Poor concentration

5. Panic attacks

6. Agitation, fidgetiness, inability to sit still

7. Feelings of hopelessness, helplessness

8. Recurrent thoughts of guilt related to self blame for the situation

9. No desire to hold or care for the baby

10. No desired to be left alone with the baby, fears about the baby's safety, frequent calls to the pediatricians, and inability to be assured

11. Inability to be reassured

12. Inability to fall asleep

13. Inability to stay asleep, waking even though baby may be asleep, and inability to fall asleep again.

14. Poor appetite or excessive eating

15. Suicidal feelings or suicide plans

Prevalence of postpartum depression

Prevalence of postpartum depression varies from 3 to 34%. The lowest reported prevalence of postpartum depression is by Kit et al (1997), by using EPDS that is 3,9%. O' Hara et al had done a meta-analysis of 59 studies and the prevalence of postpartum depression is 13%.

There are several factors that influenced the prevalence of postpartum depression (O' Hara 1996):

1. Country in which the study is conducted.

2. Whether the assessment was based on self-report (e.g. EPDS) or interview (e.g. By using Research Diagnostic Criteria (RDC)).

It is noted that self-assessment report were associated with higher prevalence estimate than interview based assessments (O'Hara 1996). Stringlund et al (1998) had done a study on 309 Swedish mothers. In this study the prevalence of postpartum depression by using EPDS that is a self-report assessment is 14.5% and 8.4% by clinical interview by using RDC criteria.

3. Length of postpartum period under evaluation (eg. One week, four weeks or six weeks). Unsurprisingly, longer period yielded higher postpartum depression prevalence estimate

• There is not much study on postpartum depression done in developing countries. Concern has been exposed about the high prevalence of depression in developing countries and need to develop cost effective intervention strategies (Cooper 1999).

One the prevalence studies were done in South Africa, Khayelistsha (Cooper 1999), which showed the prevalence of postpartum depression, is 34.7%, which is three fold higher than western figures.

Risk factors

Numerous studies have addressed the significance of various biological and non-biological factors in the etiology of postpartum depression. However, the results of the studies are conflicting. The most consistent findings link low socioeconomic status, depressed mood during pregnancy and previous psychiatric illness. (Deborah et al 2000, D. Nielsen et al 2000 and Warner et al 1996). Depressed mood during pregnancy however has also been linked to numerous adverse outcomes. Aside from placing women higher risk for postpartum depression, it has also been associated with low birth weight, preterm labour and SGA infant (Hendrick et al 1998).

Biological theories build on dramatic hormonal and endocrine changes that occur after delivery. The psychosocial and situational life stress theories consider the unique life adjustments to parenthood and vulnerability of new mothers. However evidence is mounting that indicates postpartum depression is multifactoral.

Hormonal theories have been postulated as triggers for postpartum depression emotional vulnerability (Sichel 1994, Zachary and Nemeroff 1995). To date, studies of various neurotransmitter systems and other neuroregulators have not provided evidence that any one distinguishes women with postpartum depression form women without postpartum depression.

A number of psychosocial variables have been linked to postpartum depression. A meta-analysis of 59 studies by O' Hara et al (1996) showed that the strongest predictors of postpartum depression were past history of psychopathology and psychological disturbance during pregnancy, poor marital relationship and low social support and stressful life events. This findings were also similar in other study done by Nielsen et al (2000), that the best predictors for postpartum depression were psychosocial stress in late pregnancy, perceived social isolation, high parity and positive history of prepregnant psychiatric disease.

Many studies also have looked into demographics and obstetric risk factors for postpartum depression. O' Hara et al (1996) found that low socioeconomic status showed a small but significant predictive relation to postpartum depression. This finding is similar with other study done by Warner et al (1996) that unemployment in mother or spouse may predispose to postpartum depression. However, other studies failed to show significant contribution of social

class or socioeconomic status to development of postpartum depression (Paykel et al 1980, Stowe & Nemeroff 1995).

Previous studies also have been divided on whether depression and obstetric complication .are related (Thompson et al 2000, Boyce & Todd) or unrelated (Nielsen et al 2000, Warner et al 1996). Other variables that have been reported are younger age (Paykel et al 1980) and not breastfeeding (Yonkers et al 2000 and Warner et al 1996).

Cultural factors may also contribute to postpartum mood disorder. For example, attention to the new social role of mother and to the social structuring of postpartum events as well as assistance in the development of mothering skills, have been suggested as possible factors that may protect against depressed mood after childbirth. However, there are still not enough studies done on the role or influence of cultural factors on postpartum depression especially in Asia where childbirth is considered as major event.

Overall risk factors that have emerged from research (Beck et al 1999)
Prenatal depression
Child care stress
Life stress
Lack of social support
Prenatal anxiety
Maternity blues
Marital satisfaction
History of previous depression

Onset and duration.

Postpartum depression can occur any time during the first 12 months after delivery. But for most women, postpartum depression begins in the first 3 months (Beck, 1999). In one study, researchers reported that postpartum depression began in the first 5 weeks post delivery (Cox, Murray and Chapman 1993). In another study, the onset of postpartum depression for 69 percent of mothers was within 3 months of delivery (O'Hara, 1995).

Once postpartum depression begins, as many as half of all the women experience episodes lasting 6 months or longer. O'Hara et al 1987 reported that most significant factor in the duration of postpartum depression was the length of delay to adequate treatment. Women with postpartum depression of less than 6 months had a shorter interval prior to adequate treatment than mothers whom suffered with postpartum depression longer than 6 months. In summary, the average duration of postpartum depression reported in studies is a minimum of several months.

Postpartum depression and families

Postpartum depression has many consequences- the most obvious is the mother's personal suffering. Women with previous history of postpartum depression are at 50% risk of recurrent episodes in the subsequent pregnancy (Llewellyn et al 1997) Additionally, relationship among the mother and her infant, the mother and her husband/partner and with her older children and family can also be affected and strained.

Postpartum depression and spouses

There is scant research about the impact of postpartum depression on father.

Mothers with postpartum depression had symptoms such as withdrawal and lack of

communication, along with loss of libido that could bewilder husbands and alter a couple's

relationship. Studies had showed that spouses of the affected women had a major disruption in

their lives and in their relationship with their wife as a result of postpartum depression

(Meighan, 1999). Studies also revealed that a significant number of spouses of women

suffering from postpartum depression were also found to be depressed. (Ballard, 1994).

The men experienced fear, confusion and much concern for their spouses, and felt

unable to help them overcoming postpartum depression. Even though the wives depression

lasted for varying lengths of time, however the resolution of the depression did not mean that

the marriage returned to the former state with the couple's vision of their future together

unaltered (Meighan, 1999).

Clearly the presence of postpartum depression adds tremendous strain to already stressful

postpartum period. Husband or spouse in the study done by Meighan 1999, suffered along with

the depressed wives, but however they tended to suffered in silence for fear of what others

might think. The father is especially important as the major support for the mother and child.

He will not only influence the treatment outcome but be greatly impacted by the problem. A

support group for men whose spouses suffer from postpartum depression would help new

fathers in them in the midst of the crisis.

Postpartum depression and the child

There has been considerable clinical and research attention paid to postpartum depression in recent years, in part because it occurs at a particularly important time in a woman's life. The early postpartum period is the time when the foundation of the mother child relationship is laid. Indeed large body of evidence attests to the fact that postpartum depression does have an adverse impact on the progress of this important early period.

There is compelling longitudinal evidence implicating postpartum depression in disturbances of child cognitive and socioemotional development(Cogill et at,1986, Caplan et al 1989 ,Murray et al 1996 and Wrate et al 1985). The mechanism mediating the association between postpartum depression and adverse child outcome appears to be the impaired pattern of early communication between the mother and her infant (Murray and Cooper, 1997). Currently, the strong association between maternal depression and impairment in the mother-infant relationship was found both in developed and developing countries like South Africa (Cooper, 1999).

Women with postnatal depression may experience loss of appetite, insomnia, irritability and anxiety about the baby. These feelings may have an effect on the ability of the women to form a loving relationship with her baby, as well as having an effect on existing family relationships.

As breastfeeding is an important situation for the early mother-child interaction, studies (Tamminen 1988) have shown that postpartum depression had negative influence on the attitude of the mother on breastfeeding. However, more studies are needed to find out the interaction between postpartum depression and breast-feeding.

The mother-baby relationship evolves over a period of time with mothers displaying affection, approval and sensitivity to the baby. Depressed mothers may not interact with their babies, and although physically present, may be emotionally detached and unresponsive. Infants sense this and may become withdrawn as they are repeated unable to gain theirs mother's emotional attention (Raphael-Leff 1991).

A review of research by Cooper and Murray (1998), revealed that children of mothers with postnatal illness performed less well at the age of 18 months than those children whose mothers were not ill. The effect of poor maternal/infant interactions were shown to persist to school age, with boys particularly showing poor performance and noted as having behaviorally disturbed.

Screening and detection

It is estimated that 400,000 mothers in the United States experienced this mood disorder each year (Beck 2000). However only a small proportion of these women are identified as depressed as health professionals. Ballard and George (1994) reported that the longer the delay from the onset of postpartum depression to the beginning of adequate treatment, the longer the duration of this mood disorders. This finding emphasizes the need for early diagnosis and treatment of postpartum depression.

One of the major challenges in dealing with postpartum depression has been early recognition. In the absence of screening, however primary care providers, including the obstetricians underdiagnose postpartum depression. Despite their multiple contacts with clinician during postpartum period, many mothers go without much needed treatment because their postpartum mood disorders often are not diagnosed.

Grace et al 2000 have done a comparison of screening and virtue clinical evaluation. In this study, the incidence of postpartum depression detection with EPDS was significantly higher than the incidence of spontaneous detection during routine clinical evaluation. Thus, screening for postpartum depression can be cost effective if an acceptable, convenient and standardized screening instrument such as EPDS is used.

As to the method of screening patients, there are four types of screening or detection methods:

1. Self-report questionnaires

2. Observer- rated scales

3. Structured clinical interview

4. Full clinical interview

Structured clinical interview and full clinical interview are both time consuming and impractical in screening large numbers of women. the majority of whom are well. Observer-rated scales are more practical, but they too required some form of training in their application. The self-report questionnaires such as EPDS are more practical and it can be used to screen large numbers of women. The advantages of self-report questionnaires are that it is self- report scale and by design can be used by variety of community health workers.

Summary Of The Screening / Diagnostic Instrument in Postpartum depression.

Self rated Questionnaires	Edinburgh postnatal depression scale General Health Questionnaire Beck Depression Inventory Postpartum Depression Screening Scale (PDSS)
Observer Rated Scale	Hamilton Depression Rating Scale Beck Depression Inventory Postpartum Depression Predictors Inventory (PDPI) Postpartum Depression Checklist (PDC)
Structured / semi Structured Clinical Interview	Structured Clinical Interview in DSM IV Present State Examination (PSE) Clinical Interview Schedules (CIS)
Full Clinical Interview	By Psychiatrist

Malaysian data

To date there are four studies that have been conducted on postpartum depression in Malaysia. Three of the studies were done as part of the undergraduate training programmed. ·The prevalence of postpartum depression ranged from 3.9% to as high as 37.7%. The consistent risk factors for postpartum depression from all the studies are marital problem and low socioeconomic group.

1. **Incidence of postnatal depression in Malaysian women (Kick Kit et al 1997).**

The incident of postpartum depression among mothers attending Maternal and Child Health clinic in Seremban , Negeri Sembilan using EPDS (using cut off point 12/13) is 3.9% at 6 weeks postpartum.

2. **Depressive illness after childbirth among mothers in Sungai Patani, Kedah (Saminah Kassim- presented in ASEAN Scientific onference 1998).**

This was a follow up cross sectional study looking at prevalence of postpartum depression among women in Sungai Petani, Kedah.

The mothers were screened at 2 weeks and 6 weeks after delivery using EPDS and at 6 weeks women were also interview based on CIDI.

Prevalence of postnatal depression using EPDS was 46.2% and 37.7% at 2 and 6 weeks respectively. The prevalence of Major Depression based on CIDI was 15.6%.

Risk factors for postpartum depression were financial problems, less socialization and marital adjustment.

3. Prevalence of postpartum depression and associated factors in District of Kulim, Kedah.

(Unpublished data- Samiah Yasmin 1998).

The prevalence of postpartum depression involving postnatal women within 3 months of delivery using EPDS (using cut off point 12/13) is 14%.

Low socioeconomic status, nature of husband's occupation, first time mothers and young mothers were the risk factors linked to postpartum depression.

4. Postpartum depression. A survey of the incidence and associated risk factors among rural malay women in District of Bachok, Kelantan.

(Unpublished data- Wan Mohd. Rashidi bin Wan Mahmud 1999).

The prevalence of postpartum depression using General Health Questionnaire (GHQ) at 6-8 weeks postpartum is 21 % and 9.8% using Clinical Interview Schedule (CIS).

Postpartum depression was found to be linked to low socioeconomic status, having marital problem and not breastfeeding.

General objectives:

Validation of the Malay version of the Edinburgh Postnatal Depression Scale to determined the prevalence of postpartum depression, its risk factors and a survey of sociocultural practices post delivery among women in district of Kota Bharu, Kelantan delivering between February to September 2000.

Specific objectives: .

1. Validation of the Edinburgh Postnatal Depression Scale among postnatal women in District of Kota Bharu, Kelantan.

2. To determine the prevalence of postpartum depression among resident women in district of Kota Bharu, Kelantan.

3. To observe the sociocultural practices post delivery among women in district of Kota Bharu, Kelantan.

4. To determine any possible association between the following demographic determinants, obstetric, neonatal and psychological risk factors with postpartum depression.

a) **Demographic determinants:**

Maternal age

Maternal education level

Types of marriage

. Marital status

Number of children

Employment status for the women and her husband/spouse

Total household income

b) **Obstetric and neonatal risk factors:**

Parity

Type of delivery

History of abortion

Past medical history

Past psychiatric illness

History of caesarian section

Sex of the newborn baby

Satisfaction with the sex of the newborn baby

Worry about the baby

Breastfeeding

Problem with the baby

c) Psychosocial risk factors

Traditional practices post delivery: "salai/bertungku" (heat therapy)

"bengkung" (traditional abdominal corset)

"urut" (traditional massage)

"pantang larang makanan" (food taboos)

traditional herbs/medication

postnatal ritual for example "aqiqah"

Help during the confinement

Satisfaction with the husband help

Frictions with husband, children, in-laws or neighbors

Financial worries

Problems with the occupation

Marital satisfaction

5. To ascertain whether those women who had depressive symptoms in the late pregnancy and one week postpartum at risk getting postpartum depression.

Methodology

Study Area/background

Kota Bharu is one of the ten districts in the state of Kelantan. The district of Kota Bharu is situated at the coastal area facing the South China Sea. Boundaries of Kota Bharu district include the District of Machang to south, District of Pasir Mas and Tumpat to the east. This district area is 406 km^2 with total population of 306, 700 out of 1,181,682 in Kelantan. (Yearbook Statistic of Malaysia 1997).

The primary care facilities provided here comprises of 10 major health clinics with a medical and health officer in charge of each clinic. In year 2000, there are a total of 8399 birth and out of that only 4 stillbirth or intrauterine death. Most of the mothers in this district delivered in the hospital. Only a small proportion of the mothers gave birth at home where the community nurse trained in midwifery conducted most of them.

District of Kota Bharu Health Centers
Klinik Kesihatan Kota Bharu
Pusat Kesihatan Badang
Pusat Kesihatan Pengkalan Chepa
Pusat Kesihatan Kedai Lalat
Pusat Kesihatan Wakaf Che Yeh
Pusat Kesihatan Kubang Kerian
Pusat Kesihatan Peringat
Pusat Kesihatan Lundang Paku
Pusat Kesihatan Ketereh
Pusat Kesihatan Perol

A sampling frame of the ten health centers in the District of Kota Bharu was made. A random sampling of 40% of the sampling frame was done and four health centers were randomly selected. The health centers were:
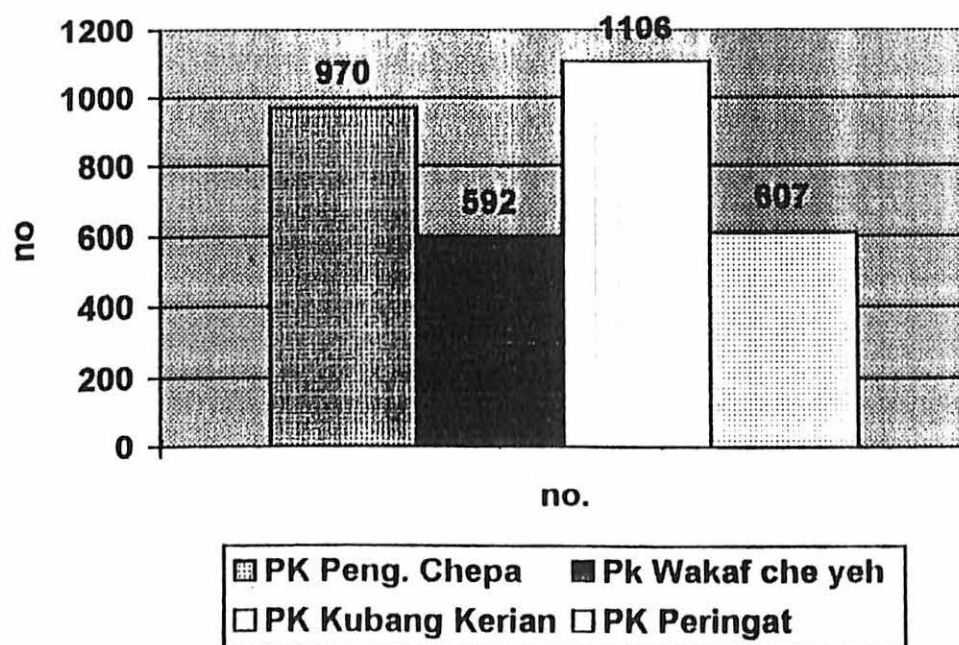
Pusat Kesihatan Peringat

Pusat Kesihatan Kubang Kerian

Pusat Kesihatan Wakaf Che Yeh

Pusat Kesihatan Pengkalan Chepa

Total Deliveries in the Health Centers involved in the study in 2000

Legend:
- ▦ PK Peng. Chepa
- ■ Pk Wakaf che yeh
- □ PK Kubang Kerian
- □ PK Peringat

Values: 970, 592, 1106, 607

Study Design and Sampling

This is a cross sectional study. It was carried out in the four selected health centers in District of Kota Bharu.

The calculated sample size: 400 samples.

Confidence interval: 95%

Power of study: 90%

Prevalence: 10 %

The study sample will include all pregnant women who attended Maternal and Child Health Clinic at 36 to 42 weeks period of amenorrhoea. Informed consent was obtained for the participation into the study. The women were given questionnaire either at the time of their visit to the Health Center or the small clinics or the questionnaire were given to them by the midwifes or nurses covering the area. The study was started in February until September 2000.

Instruments.

The screening method that was used is the ten item of Edinburgh Postnatal Depression Scale. (Cox et al 1987) that has been validated in Malay version.

Training of interviewers.

At least one staff from each health clinics will be trained as an interviewer in case if there are illiterate mothers who are willing to become respondents. Guidance for the interviewer will be taken from the National Health and Morbidity Survey- Interviewer Manual.

Procedure:

These women were given questionnaires on three occasions:

On the first occasion at 36 to 42 weeks period of amenorrhoea, the women were asked to fill two parts questionnaire. The first part is demographic self-report and the second part is the Malay version of EPDS.

The second occasion took place at about 1-week post delivery. At this time the women were given the Malay version of EPDS only.

The third occasion will take place at about 4 weeks post delivery. During this occasion, the women were given two parts of questionnaires.The first part consisted of psychosocial and traditional postnatal care and practices. The second part is the Malay version of EPDS.

Exclusion Criteria:

1. Presence of organic brain syndrome

2. Severe mental disorder including Schizophrenia and bipolar disorder

3. Mental retardation

4. Drug abuse

5. Mothers who refuse to cooperate with or without reason.

Statistical Analysis

Data entry and analysis were done by using SPSS version (9.0). The χ^2 test was used to assess the association between postpartum depression and categorical risk factors. Logistic regression was used when multiple variables were considered simultaneously.

Methodology (Flow Chart)

400 antenatal mothers between 36-42 weeks period of amenorrhoea were selected from the health clinics in the District Of Kota Bharu. The antenatal cards were tagged. The mothers were given EPDS (which was translated into Malay), and questionnaires on demographic data.

$\downarrow$

One week after delivery, the midwife or the community nurses gave the patients similar EPDS when they went for home visits to the mothers' houses.

$\downarrow$

At 4-6 weeks post delivery, the mothers were given the last EPDS and questionnaires on postnatal care and practice.

Validation of the Malay version of the Edinburgh Postnatal Depression Scale

Introduction

The lack of suitable instruments for psychiatric surveys is a major problem faced by many researchers and students in higher institutions of learning. Most of the instruments available were developed in the west. They need to be translated and validated so that it can be used with precision in the local context.

The 10-item EPDS was chosen because it is relatively simple short and takes less than 10 minutes to be filled by respondent, making it practical for use in busy postnatal ward and home visit. Primarily, it has been developed to assists primary care health professional to detect mother suffering from postnatal depression.

Translation of the Edinburgh Postnatal Depression Scale

The EPDS was translated into Malay language using back-translation method. Four schoolteachers who are bilingual in both English and Malay had translated the EPDS into Malay. Three doctors who are also bilingual in the same setting translated this translated Malay version of EPDS back into English. Both scales were compared whether the meanings of the questions are the same.

Pretest and revision of questionnaire

The translated questionnaires were tested on 20 mothers in the postnatal wards in HUSM.

Each mother were interviewed and assessed if they had misunderstood any question.

The scale was found to be acceptable and no revision required.

Instruments

Edinburgh Postnatal Depression Scale (EPDS)

It is self-rated questionnaire, consists of ten short statements of common depressive symptoms and uses a Likert-type format for responses. The mother underline which of the possible responses is closest to how she has been feeling for the past week. Each question has a scale from 0-3 according to the severity of the symptoms. Possible scores on the EPDS range from 0-30.

The ten symptoms of depression included in the EPDS are the following:

Inability to laugh

Inability to look forward to things with enjoyment

Unnecessary blaming of oneself

Anxious or worried feeling

Scared or panicky feeling

A feeling that things have been getting on top of me

Difficulty sleeping because of unhappiness

Sad or miserable feeling

Crying

Thought of harming oneself

Cox et al constructed EPDS in 1987. In developing the question, Cox et al had done a detailed analysis of three scales. (Cox et al 1987)

1. Irritability, Depression and Anxiety scale (IDA) (Snaith et al, 1978)

2. The Hospital Anxiety and Depression Scale (HAD) (Zigmond and Snaith, 1983)

3. The Anxiety and Depression Scale of Bedford & Joulds (1978)

EPDS was developed specifically for the assessment of depression after birth. It does this by omitting the question about changes in sleep patterns, appetite, rest, waking and other somatic symptoms that are difficult to interpret in the context of motherhood. Waking early in the morning, having a much greater appetite, feeling constantly tired or being unable to visit friends, as often as usual are typical and possibly inevitable aspects of being a new mother. In other context, these common symptoms of depression and as such are included in most depression rating scales.

Comparisons of the EPDS with an interview diagnosis made according to strict criteria have been carried out in three communities sample in Britain.(Cox et al 1987, B. Harris,P. Huckle, S. John and H. Fung 1989, L. Murray and AR Carothers 1990) These

have demonstrated its validity both for identifying women who are depressed and for ruling out depression.

Various data about the specificity and sensitivity of EPDS have been reported. Using a threshold of 12.5, Cox et al 1987, reported a sensitivity of 78% in a sample of 89 women. The EPDS has been validated in Australia (Boyce et al 1993), Italy (Capniello et al 1997), South Africa (Lawrie et al 1998), Netherlands (Pop et al 1992), Hong Kong (Lee et al 1997) and Sweden (Wickberg 1996). From the validation studies, this scale has a sensitivity of 67-100% and a specificity of 49-95%. All these studies used the gold standard of a psychiatry interview to diagnose depression clinically as a means of determining the sensitivity, specificity and the positive predictive value.

Studies from the west (Cox et al 1987, B. Harris,P. Huckle, S. John and H. Fung 1989, L. Murray and AR Carothers 1990) had showed that scores above 12 were likely to be suffering from depressive illness of varying severity. Study among Chinese population in Hong Kong had taken the cut-off point of 9/10. This study will try to delineate the cut-off point appropriate to the Malay population in Kelantan.

EPDS also has been shown that it can be used to detect depression in mothers of older infant, with fathers and with group of women who were not recent mothers. (Cox et al 1993). In 1996, Professor Cox had validated EPDS for use in non-postnatal women. (Cox 1996). In this study, the EPDS was found to have sensitivity of 79% and specificity of 85%.

Thompson et al (1998) had done a comparison of 3 rating scales, which has been used previously in the diagnosis of postnatal depression. The rating scales are Edinburgh Postnatal Depression Scale (EPDS), Hospital Anxiety and Depression Scale (HAD) and the Hamilton Rating Scale for Depression (HAMD). In this study, the performance of EPDS was found to be superior to that of the HAD in identifying RDC-defined Depression, and on par with the observer rated HAMD which is also matched for sensitivity to change in mood state over time.

Since most of the women in this study are illiterate, a Malay version of the EPDS was validated for the women in District of Kota Bharu, Kelantan. The cut-off point was based on the validation study that was done at the same time. . However, this scale does not replace a full psychiatric assessment but defines a population who needs further evaluation.

30-item General Health Questionnaire

The Malay version of the 30-items General Health Questionnaire (GHQ 30) was used in the validation study. It is a self-report questionnaire design for used in the primary care settings or general out patients. It consists of broad symptoms of psychiatric disorder found amongst the general population. Each item has four possible responses and the recommended " GHQ scoring" (Goldberg 1978) is (0-0-1-1).

In Malaysia, the instrument has been validated in the local population using English

(Maniam1996) and the Malay Versions (Abdul Hamid & Hatta 1996). Maniam (1996)

used a cut-off point of 6/7 instead of 4/5 in the original GHQ manual (Goldberg 1978)

whereas Abdul Hamid & Hatta (1996) recommended 7/8 to be desired cut-off point.

In the study by Abdul Hamid & Hatta, the sensitivity of the Malay version GHQ is 96.0%

and specificity of 93.3%.

Hamilton Rating Scale for Depression (HRSD)
(Hamilton 1967)

This is designed to be filled in at the end of unstructured interview lasting about an hour.

It contains 17 variables; each rated on 3- or 5- point scale. The scale mainly concerned

with behavioral and somatic features of depression rather than psychological and

cognitive ones. It is not designed as a diagnostic instrument.

Clinical Interview Scheduled (CIS)
(Goldberg et al 1970)

This a partially structured psychiatric interview which assess ten reported symptoms

during the previous week and 12 abnormalities. Manifest at interview, each on a 5-point

scale. The interview was designed for community surveys rather than for use with

psychiatric patients. It takes about 10-20 minutes for normal individuals and about 30-60

minutes for those with psychological symptoms. It is not suitable for assessing patients

with psychotic disorder, organic states, alcoholism or personality disorder, but it is useful

for people with minor psychiatric disorder or people who may not see themselves as

psychiatrically disturbed.

Methodology:

This is a cross-sectional study done in Pusat Kesihatan Kubang Kerian, District of Kota

Bharu, Kelantan. In February 2001, 52 mothers at 4-12 weeks post delivery were

approached for the study at the time of their visit to the Health Center for routine

postpartum examination or immunization for their infants. All mothers who are eligible

for the study were given EPDS, the Malay version 30-item GHQ and Hamilton

Depression Rating Scale that was translated to Malay. They were then reassessed with

Clinical Interview Schedule (CIS) by the author who was trained by psychiatrists

involved in the study to establish the diagnosis of Depression. The positive cases were

discussed with the psychiatrists who were involved in the study to agree on the diagnosis.

Statistical Analysis.

Data entry and analysis was done using SPSS software (version 9.0).

The validity of EPDS was tested against 30-item GHQ and Hamilton Depression Rating

Scale by using Pearson and Spearman Correlation test. The specificity , sensitivity and

positive predictive value of EPDS was measured based on CIS.

Exclusion Criteria:

1. Presence of organic brain syndrome

2. Severe mental disorder including Schizophrenia and bipolar disorder

3.Mental retardation

4. Drug abuse

5.Mothers who refuse to cooperate with or without reason.

Result:

Validation study

In February 2000, 54 women were approached at Pusat Kesihatan Kubang Kerian and invited to participate in the validation study. Two women refused to participate and 52 women agreed to participate in the study. The women age range from 20 to 40 years old. All of the women were married. No mothers had history of handicapped or stillborn baby. The mean of the postpartum period for the women was 7.1 weeks. (Range 4-12 weeks)

Table: The mean scores of the EPDS, GHQ and Hamilton Depression Scale in the validation study.

Scales	Non-depressed (N=41) Mean score	Depressed (N=11) Mean score	t-test
EPDS	5.7	12.5	P=0.00
GHQ	2.6	8.2	P=0.00
HDS	4.5	15.6	P=0.00

The EPDS score for the sample range from 7-19. There was a significant difference in all the mean score that were used in this study between the non-depressed and depressed group.

The rates of women fulfilling the ICD-10 criteria for depression in the study were 21%. (11 women). 4 of the women fulfilled the criteria of Major Depression and 7 others were classified as other Depressive episodes.

F: 32.0:Mild Depression = 2 women

F: 32.1: Moderate Depression = 2 women.

Other categories: other depressive episodes = 7 women.

The validation of EPDS was determined for the sample (n=52) by comparing the EPDS

scores with ICD-10 diagnosis of depressive illness.

The EPDS with Minor and Major Depression.

At 11.5 cut-off point, the sensitivity is 72.7% and specificity is 95.1%. The use of higher

cut-off point (12.5) would reduced the sensitivity to 54.5% but would increased the

specificity to 100%. Lowering the cut-off point of EPDS to 10.5 would reduce the

specificity to 92.6% but the sensitivity would remain the same. (72.7%).

Specificity and sensitivity of EPDS based on Major and Minor Depression (ICD 10)

EPDS threshold	Sensitivity %	Specificity %
6.5	100	60.9
7.5	90.9	65.8
8.5	81.8	78
9.5	72.7	90.2
10.5	72.7	92.6
11.5	72.7	95.1
12.5	54.5	100
13.5	27.2	100
14.5	27.2	100
15.5	18.1	100

Specificity and sensitivity of EPDS based on Major Depression (ICD 10)

EPDS threshold	Sensitivity %	Specificity %
6.5	100	52
7.5	100	58.3
8.5	100	70.8
9.5	100	83.3
10.5	100	85.4
11.5	100	87.5
12.5	75	93.7
13.5	25	95.8
14.5	25	95.8
15.5	25	97.9

The EPDS and Major Depression

At 11.5 cut-off point, the EPDS identified all the women who had Major Depression

making its sensitivity 100% and specificity 87.5%. Increasing the cut-off point to 12.5

would decreased the sensitivity to 75% but increased its specificity to 93.7%.

EPDS threshold	Both major and minor Depression Sensitivity %	Major Depression Sensitivity %	Both Minor and Major Depression Specificity %	Major Depression Specificity %
6.5	100	100	60.9	52
7.5	90.9	100	65.8	58.3
8.5	81.8	100	78	70.8
9.5	72.7	100	90.2	83.3
10.5	72.7	100	92.6	85.4
11.5	72.7	100	95.1	87.5
12.5	54.5	75	100	93.7
13.5	27.2	25	100	95.8
14.5	27.2	25	100	95.8
15.5	18.1	25	100	97.9

The scatter plot of EPDS and GHQ scores

TEPDS (y-axis): 0, 10, 20

TGHQ (x-axis): -10, 0, 10, 20

The duration of postpartum period

Std. Dev = 2.99
Mean = 7.2
N = 52.00

POSTPART

The EPDS score

Std. Dev = 4.22
Mean = 7.1
N = 52.00

TEPDS
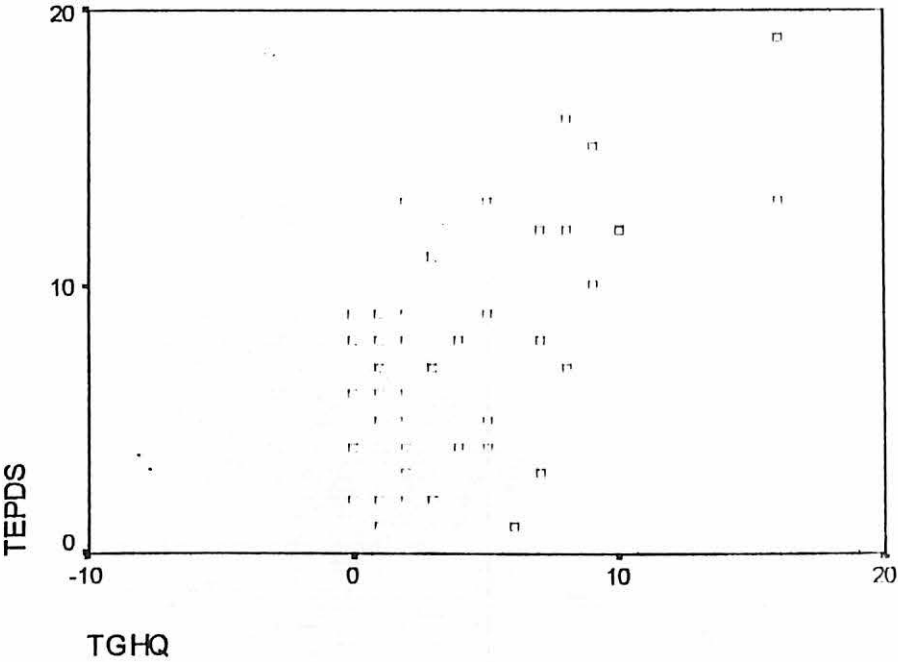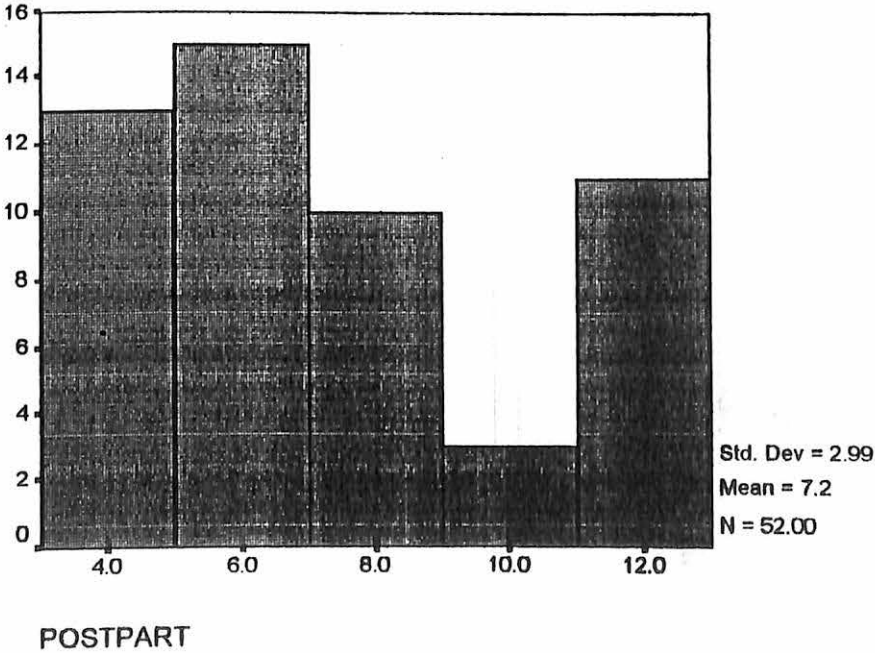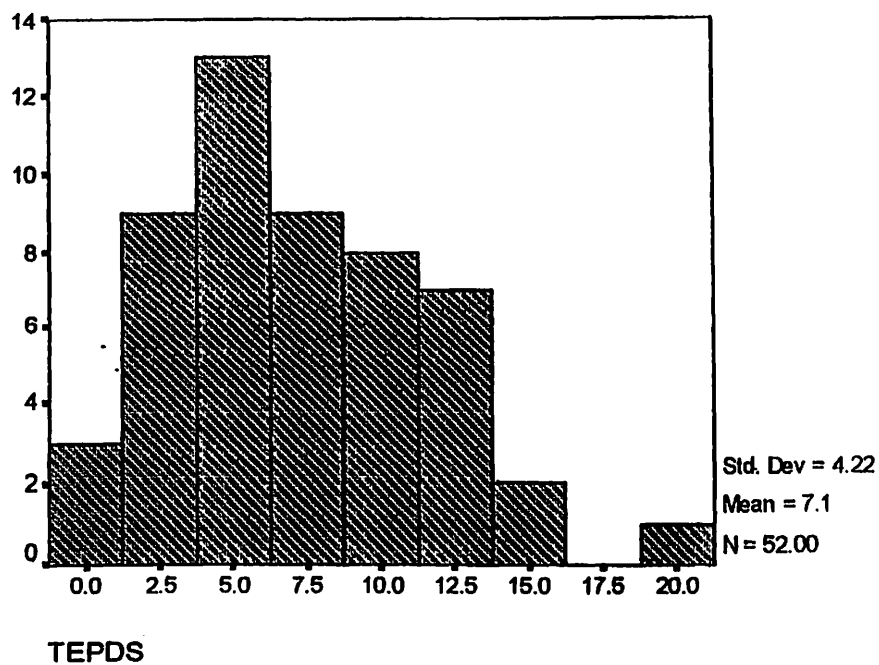
Ths scatter plot of EPDS and HDS score

THAMIL
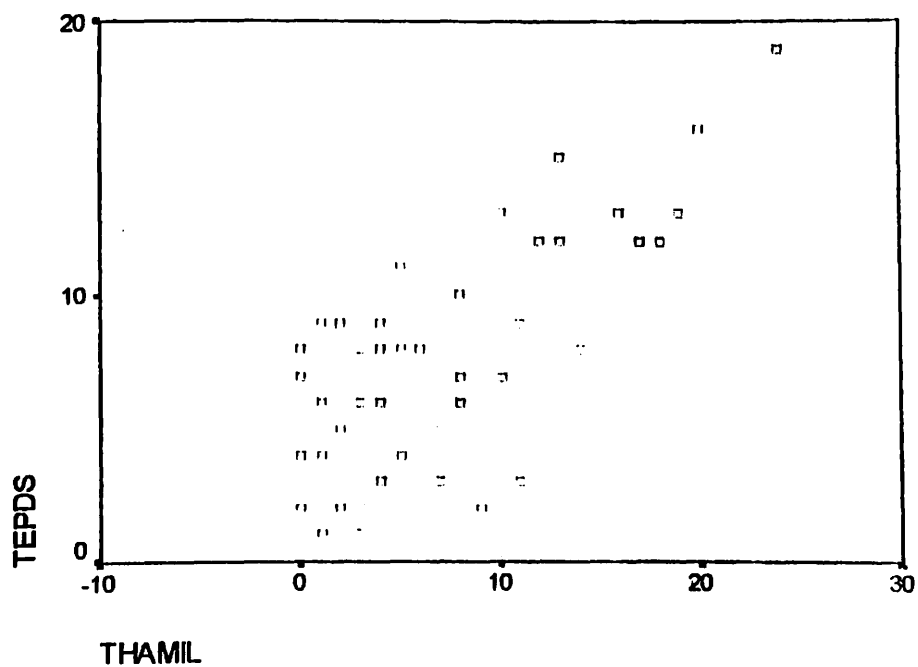
The rates of Depressive disorder based on ICD-10 criteria

8%

14%

78%

Legend:
- Major Depression
- other depression
- non-depressed
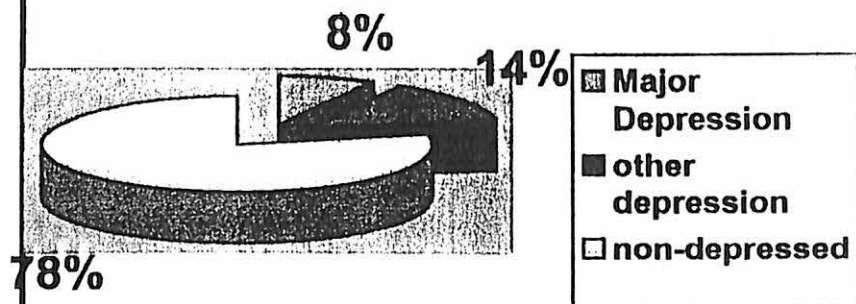
From February to September 2000, 421 women were include in the study, however 44
women were excluded from the study because they did not complete all the three stages
of the study. The main reasons are:

1. Transfer to another District or states.

2. Transfer to private practitioner for continuation of medical surveillance.

So, the number of women that completed all the three stages was 377.

421 women

↓

44 women were excluded.

↓

377 women included in the study

Prevalence of Postnatal Depression

The prevalence of PND was calculated from the third EPDS that was taken at 4-6 weeks
postpartum. Using the cut-off point of 11.5 (sensitivity of 72.7% and specificity of 95.1%
from the validation study), those women who scored 12 and above were considered to be
depressed. Based on this calculation, the prevalence of Postnatal Depression in District of
Kota Bharu was 20.7%.

The prevalence of Postnatal Depression in Kota Bharu

21%

PND
non-depressed

79%
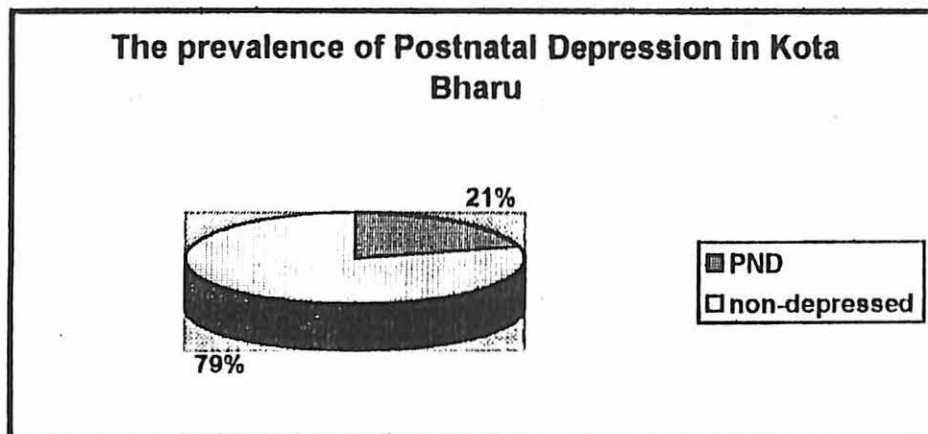
Chart 1.1: The prevalence of PND in District of Kota Bharu, Kelantan.

1. Demographic Detail

a. Age

The mean age for the sample was 31.3 ranging from 18 to 45 years old. There was no significant different between the mean age of the women with PND and those without PND.

Table 1.1: The mean age of the two groups of women

	Non Depressed	PND
Mean age (years)	31.4	31.0

Chi square test: p > 0.05

Table 1.2: The distribution of the women's age in groups.

Age grouping (years)	No	Percentage %
< 27	95	25.2
27-31	102	27.1
32-36	97	25.7
> 36	83	22.0
Total	377	100.0

b. Race

98.8% of the sample are Malays and 99.0% of the women are married.

c. Types of marriage

87.5% of the marriage are monogamous and 12.5% are polygamous. There were no significant different in types of marriage between the two groups.

Table 1.3: Types of marriage

Types of marriage	Non-depressed No.	%	PND No.	%
Monogamous	264	88.3	66	84.6
Polygamous	35	11.7	12	15.4
Total	299	100.0	78	100.0

d. Duration of marriage

The mean duration of marriage for the whole sample was 9 years. There was no significant different in duration of marriage between the two groups of women.

Table 1.4: Duration of marriage.

Duration of marriage (years)	Non-depressed No.	PND No.	Total
< 7	112	33	145
7-11	90	23	113
>11	97	22	119
Total	299	78	377

e. Education level of the women.

Most of the women (48.8%) had education up to SPM and another 25.7% had education up to SRP. Only two of the women that were in the non-depressed group had no formal education. There was no significant different in education level between the non-depressed and those with PND.

Table 1.5: Education level of the patient.

Education level	Non depressed No.	%	PND No.	%
University	22	7.4	5	6.4
STPM	39	13.0	8	10.3
SPM	145	48.5	39	50.0
PMR/SRP	75	25.1	22	28.2
Primary school	16	5.4	4	5.1
No schooling	2	0.7	0	0.0
Total	299	100.0	78	100.0

f. Women's employment status.

72.9% of the women were housewife and only 16.2% of the women worked with the government. Table 1.4 showed that the percentage of women who became housewives were higher in the PND group and this different is significant.

‍

Table 1.6: Women's employment status.

Occupation	Non depressed No.	%	PND No.	%
Housewife	210	70.2	65	83.3
Government	56	18.7	5	6.4
Private	20	6.7	6	7.6
Self employed	13	4.3	2	2.6
Total	299	100.0	78	100.0

Chi square test: $p < 0.05$

g. Number of children

The number of children range from 0-14. The mean number of children for the

sample was 3. However, 49.6% of the women had less than 3 children. There was no

significant different in number of children between the non-depressed and those

women with PND.

Table 1.7: The distribution of numbers of children in non-depressed and those women

with PND.

No. of children	Non-depressed No.	%	PND No.	%
< 3	142	47.5	45	57.7
3-4	97	32.4	22	28.2
>4	60	20.0	11	14.1
Total	299	100.0	78	100.0

h. Husbands' employment status.

The distributions of occupations were almost the same for the government, self-employed or private sector. There were no significant different between the non-depressed or those with PND.

Table 1.8: The husbands' employment status.

Occupations	Non-depressed No.	%	PND No	%
Non-employed	1	0.3	0	0.0
Government	110	36.8	27	34.6
Private	95	31.1	24	30.8
Self-employed	93	31.1	27	34.6
Total	299	100.0	78	100.0

Chi-square test: p>0.05

i. Total income in month.

37.9% of the sample had total income per month less than RM 500.00.

Table 1.9: Total income in a month.

Total income in a month RM	Non –depressed No.	%	PND No.	%
< RM 300	25	8.4	2	2.6
RM 300-500	88	29.4	28	35.9
RM 501-1000	111	37.1	38	48.7
RM 1001-2000	47	15.7	7	9.0
>RM 2000	28	9.4	3	3.8
Total	299	100.0	78	100.0

2. Obstetric and neonatal factors.

2.1. Parity

The mean parity for the women was 4. The mean parity was the same for both groups. (4)

The parity for the sample range from 0-15 and primip constitute 15.3% of the sample.

Table 2.1: The distribution of parity.

Parity	Non-depressed No.	PND No.	Total
1	38	17	55
2-4	139	35	174
>4	122	26	148
Total	299	78	377

2.2. Planning of pregnancy

56.8% of the women in the study did not plan their pregnancy. 59.0% of the women in the PND group did not plan their pregnancy compared to 56.2% of the women in the non-depressed group who did not plan their pregnancy. However , the difference is not significant.

Table 2.2: Planning of pregnancy.

Planning of pregnancy	Non-depressed No.	%	PND No.	%
Unplanned	168	56.2	46	59.0
Planned	131	43.8	32	41.0
Total	299	100.0	78	100.0

2.3. Past history of abortion

21.7% of the total women in the sample had history of previous abortion. There was no significant different in percentage of history of abortion between the two groups.

Table 2.3: Past history of abortion

History of abortion	Non-depressed %	PND %
Yes	22.0	20.5
No	78.0	79.5
Total	100.0	100.0

2.4. History of medical illness

Table 2.4: History of medical illness.

History of medical illness	Non-depressed No.	PND No.
Yes	25	10
No	274	68
Total	299	78

2.5. Past psychiatry history.

8 women from the sample claimed had history of past psychiatry illness.

The psychiatric illness were history of postpartum depression, stress, anxiety and depression. There were no significant different in no of women who had history of past psychiatry problem between the two groups.

Table 2.5: Past psychiatric illness.

Past psychiatric illness	Non-depressed No.	Pnd No
Yes	6	2
No	293	76
Total	299	78

2.6. History of Caesarian section.

Table 2.6: Past history of Caesarian section.

History of Caesarian section	Non-depressed No.	PND No.
Yes	21	6
No	278	72
Total	299	78

2.7. Sex of the babies and satisfaction with the babies' sex.

Table 2.7: Sex of the babies.

Sex of the babies	Non-depressed No.	PND No.
Girl	150	41
Boy	149	37
Total	299	78

Table 2.8: Satisfaction with the sex of the babies.

Satisfaction with the sex of the babies	Non-depressed No.	PND No.	Total No.
Not satisfied	2	0	2
Satisfied	12	5	17
Very satisfied	285	73	358
Total	299	78	377

2.8. Types of delivery and the outcome of pregnancy.

Table 2.9: Types of delivery

Types of delivery	Non-depressed No.	PND No.	Total No.
SVD	283	71	354
Assisted delivery	11	3	14
LSCS	5	4	9
Total	299	78	377

Table 2.1.1: Outcome of pregnancy

Outcome of pregnancy	Non-depressed No.	PND No.	Total No.
Babies ' dead	6	3	9
Babies alive	293	75	368
Total	299	78	377

2.9. Status of the babies' health.

Table 2.1.2: Status of the babies' health.

Medical problem	Non-depressed No.	PND No.	Total No.
Yes	51	13	64
No	248	65	313
Total	299	78	377

j. Problem with the baby.

The mothers were asked if they thought that their babies were giving them a lot of problem such as excessive crying, lack of sleep and irritability. 36.3% of the mothers thought that they had problem with the babies. Although, the mothers who were in the PND group report a lot more problem with their babies (69.2%) than mothers who were not depressed (62.2%), this difference is not significant.

Table 2.1.3: Problem with the baby.

Problem with the baby	Non-depressed No.	PND No.	Total No.
Yes	186	54	240
No	113	24	137
Total	299	78	377

k. Worry about the baby

It seems that the women in the PND group were more worried about their babies (66.7%) than the women in non-depressed group(50.5%).

Table 2.1.4: Worry about the babies.

Worry about the baby	Non-depressed No.	%	PND No.	%
No	148	49.5	26	33.3
Yes	151	50.5	52	66.7
Total	299	100.0	78	100.0

Chi square test: p< 0.05.

l. Breastfeeding

Most of the women (89.7%) in the study breastfed their babies within 4-6 weeks postnatal. It seems that those women in the depressed group breastfed their babies(93.6%) higher than those women in non-depressed group. However, the different is not significant.

Table 2.1.5: Breastfeeding

Breastfeeding	Non-depressed No.	PND No.
No	34	5
Yes	265	73
Total	299	78

3. Psychosocial determinants

3.1. Traditional practices post delivery.

3.1.1. Traditional massage ("urut")

Table 3.1.1: Traditional massage post delivery

Urut	Non-depressed No.	%	PND No.	%
No	13	4.4	7	9.0
Yes	286	95.6	71	91.0
Total	299	100.0	78	100.0

* Chi square test: p<0.05

3.1.2. Heat therapy ("salai/bertungku")

Table 3.1.2: Heat therapy.

Heat therapy	Non-depressed No.	%	PND No.	%
No	35	11.7	13	16.7
Yes	264	88.3	65	83.3
Total	299	100.0	78	100.0

* Chi square test: p< 0.05

3.1.3. Traditional corset.("bengkung")

Table 3.1.3: Traditional Corset

Traditional corset	Non-depressed No.	%	PND No.	%
No	31	10.4	12	15.4
Yes	268	89.6	66	84.6
Total	299	100.0	78	100.0

Chi square test: $p > 0.05$

3.1.4. Traditional medicine/Herbs

Table 3.1.4: Traditional medicine/herbs

Traditional medicine	Non-depressed No.	%	PND No.	%
No	20	6.7	2	2.6
Yes	279	93.3	76	97.4
Total	299	100.0	78	100.0

* Chi square test: $p < 0.05$

3.1.5. Food taboos post delivery

Restricted diet post delivery according to the "pantang larang" /food taboos.

Table 3.1.5: 'Pantang larang" / food taboos post delivery

"Pantang larang" post delivery	Non-depressed No.	%	PND No	%
No	14	4.7	7	9.0
Yes	285	95.3	71	91.0
Total	299	100.0	78	100.0

Chi square test: p>0.05

3.1.6. Postnatal ritual for example "aqiqah" or "bercukur".

Table 3.1.6: Postnatal ritual.

Post natal ritual	Non-depressed No	%	PND No	%
No	14	4.7	6	7.7
Yes	285	95.3	72	92.3
Total	299	100.0	78	100.0

● Chi square test: P<0.05

3.2. Problems:

3.2.1. Problems or friction with husband

Table 3.2.1: Problems with husband

Problems with husband	Non-depressed No.	%	PND No.	%
No	242	80.9	54	69.2
Yes	57	19.1	24	30.8
Total	299	100.0	78	100.0

- Chi square test: $p < 0.05$

3.2.2. Problems with the children

Table 3.2.2: Problem with children

Problems with children	Non-depressed No.	%	PND No.	%
No	214	71.6	53	67.9
Yes	85	28.4	25	32.1
Total	299	100.0	78	100.0

Chi square test: $p > 0.05$

3.2.3. Problems with in-laws

Table 3.2.3: Problems with in-laws.

Problems with in-laws	Non-depressed No.	%	PND No.	%
No	249	83.3	64	82.1
Yes	50	16.7	14	17.9
Total	299	100.0	78	100.0

Chi square test: p>0.05

3.2.4. Problems with neighbor

Table 3.2.4: Problems with neighbor

Problems with neighbor	Non-depressed No.	%	PND No.	%
No	266	89.0	71	91.0
Yes	33	11.0	7	9.0
Total	299	100.0	78	100.0

Chi square test: p>0.05

3.2.5. Financial problems

Table 3.2.5: Financial problems among the women in the study

Financial problems	Non-depressed No.	%	PND No.	%
No	185	61.9	34	43.6
Yes	114	38.1	44	56.4
Total	299	100.0	78	100.0

- Chi square test: p<0.05

3.2.6. Occupational problems

Table 3.2.6: Occupational problems among the women in the study.

Occupational problems	Non-depressed No.	%	PND No.	%
No	231	77.3	54	69.2
Yes	68	22.7	24	30.8
Total	299	100.0	78	100.0

Chi square test: P>0.05

3.3. Marital satisfaction

Table 3.3: Marital satisfaction among the women in the study

Marital satisfaction	Non-depressed No.	%	PND No.	%
No	12	4.0	3	3.8
Yes	287	96.0	75	96.2
Total	299	100.0	78	100.0

Chi square test: p>0.05

3.4. Help during the confinement

Table 3.4: Help during the confinement

Help during the confinement	Non-depressed No.	%	PND No.	%
No	21	7.0	4	5.1
Yes	278	93.0	74	94.9
Total	299	100.0	78	100.0

Chi square test: p>0.05

3.5. Satisfactions with the husband help during the confinement.

Table 3.5: Satisfactions with the husband help during the confinement

Satisfaction with the husband help	Non-depressed No.	%	PND No.	%
No	5	1.7	3	3.8
Yes	294	98.3	75	96.2
Total	299	100.0	78	100.0

Chi square test: P>0.05

4. Comparison of Depressive disorder based on EPDS in all the three stages of the study.

Table 4.0: Prevalence of Depressive disorder

Occasion/stages of the study	No. of women who scored 12 or more in the EPDS	% of depressive disorder based on EPDS
In late pregnancy	114	30.2
1 week postpartum	86	22.8
4-6 weeks postpartum	78	20.7

4.0.Multiple Logistic Regression Analysis

Variables	P value	Odd Ratio (95% CI)
Traditional medicine	0 01	
No		1
Yes		9.7 (1.7-56)
Traditional massage	0.02	
No .		1
Yes		0.2 (0.06-0.76)
Worried about the baby	0.00	
No		1
Yes		2.5 (1.4-4.7)
Depression in late pregnancy	0.00	
No		1
Yes		3.0 (1.6-5.5)
Postpartum Blues	0.00	
No		1
Yes		7.6 (4.0-14.2)

Conclusion

The Malay version of the EPDS is a reliable and valid screening tool for Postnatal Depression. Using the cut-off point of 12 and above the sensitivity of EPDS is 72.7% and specificity is 92.6%.

The prevalence of EPDS in District of Kota Bharu, Kelantan is 20.7%, which is more common compared to previous reported series in Malaysia.

Depressive symptoms in late pregnancy, one week postpartum and worried about the baby significantly predicted Postnatal Depression. However, Traditional massage seems to have protective effect.

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