Postpartum Depression Among Thai Women: A National Survey

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Objective: *To determine prevalence rates and associated factors of postpartum depression among Thai women.*
Material and Method: *A cross- sectional national survey and descriptive study of 1,731 women was done. The participants were required to complete a self-administered questionnaire consisting of inquiries on social demographic data, obstetric data, maternal and child health, stressful life events within the past 12 months, support system, and 10 items of the Edinburgh Postnatal Depression Scale-Thai version. The prevalence and associated factors of postpartum depression (PPD) were evaluated.*
Results: *The prevalence of PPD among Thai women was 8.4%. In the multivariate model, the factors independently associated with PPD included maternal health, marital conflict, economic burden, stressful life events, and previous depression. Support from their families was a protective factor from postpartum depression.*
Conclusion: *The present study found that PPD was 8.4%. Screening for depression in women after giving birth should be taken into consideration. Public health intervention targeted for population with PPD may be needed to reduce the prevalence of PPD and its impacts.*

Keywords: *Prevalence, Postpartum depression, Associated factors*

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Depression is ranked in the third place in the estimation of burden of disease among Thai women[1]. Postpartum depression (PPD) refers to a non-psychotic depressive episode that begins in or extends into the postpartum period[2]. PPD is common. The condition can evolve from a preexisting case of the baby blues, become apparent after the first weeks of giving birth, and last up to one year[3,4]. Symptoms of PPD can range from the classic depressed mood and/or loss of interest in daily activities to other associated symptoms including poor appetite, sleep disturbance, psychomotor agitation or retardation, guilty feeling, poor concentration, and suicide ideation[5].

There are various adverse effects of PPD on mothers, infants, and their families[6]. Mothers who suffer from PPD usually endure unfavorable consequences, especially their inability to feel gratification in motherhood role, to cope with life events, and to perform parenting tasks[7]. PPD elicits negative clinical implications for maternal-infant relationship, commonly noted by inability to interact appropriately with her child[8] by withdrawn and disengaged behavior in the mother, and/or intrusive and hostile mother-infant communication[2,7].

The international prevalence of PPD ranges from 4.8% to 25% of new mothers[9,10]. The prevalence of PPD among Thai women was found to range from 5.7% to 25% at local or provincial level[11-13]. There is no current national prevalence of PPD among Thai women.

Postpartum depression was not only most strongly associated with poor marital adjustment, recent life stressors, ante-partum depression, but also was associated with lack of social support, abuse of the mother and a history of psychiatric disorders in the mother. Marital dysfunction was associated with poor marital adjustment before birth and traditional sex-role expectation while physical illness was correlated with recent life stressor[14].

Material and Method

Study design

The present study aims to determine national prevalence rates of PPD and the associated factors for the condition among Thai women. A cross sectional descriptive study carried out over all the country including Bangkok. This study was the first nationwide survey that assessed postpartum depression between six and eight weeks after delivery of a live birth. The

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sample size was calculated on the basis of an assumed PPD prevalence of 20%, estimated prevalence of PPD in Thai population varied between 5.7% and 25%, a design effect of 2, and a 95% confidence interval (CI) (±5%). The sample size included 1,225 women, with 15% additional to the sample as compensation for uncompleted data. Twenty teenagers from each province were added to increase the proportion of sample of age group under 20 years. The stratified multistage sampling was employed to obtain the sample. In the first stage, the author divided the population into four regions and Bangkok. In the second stage, the author used randomized sampling to select three provinces in each region weighted by provincial birth rate from birth registry of year 2009. In the third stage, data was collected at provincial hospital level. Data of mothers of all ages who visited the clinic at six to eight weeks after delivery were collected until met the total number of population and then collected data from the mothers aged under 20 years. Women who delivered stillbirth babies or had psychotic symptoms were excluded from the present study. The survey was conducted between July 2011 and December 2011. All women were asked to sign the informed consent. In case that participants were younger than 18 years old, the consent were collected from their parents or guardians. The study proposal were submitted, reviewed, and officially authorized by the ethic committee of the Department of Mental Health, Ministry of Public Health before conducting the survey.

Instruments and data collection

The questionnaire inquired about the social demographic and obstetric factors, maternal and child physical health, child rearing, negative life events in the past 12 months and support systems. Symptoms of postpartum depression were assessed by the Edinburgh Postnatal Depression Scale (EPDS), Thai-version. The EPDS is a comprehensive and widely used self-report screening tool for PPD. The instruments contained 10 items with a 4-points scale to measure range of affirmative response from 0 (not at all) to 3 (very often). A systematic review of validity studies of the EPDS suggested a score of 9-10 as the indicator for possible PPD, and a score of 12-13 for probable PPD[15]. In the present study, a score of 12-13 in Thai EPDS was used as the indicator for major PPD[16].

The prevalence of PPD (EPDS ≥13) was estimated by using population weights. Frequencies and standard deviations were used for descriptive data. The author used Chi-square for categorical variables to test and compare all variables. Correlation between the outcome variables of postpartum depression and the independent variables was assessed by using multivariate analysis.

Enter model of logistic regression analysis, adjusted for confounding variables, was used to identify independent risk factors for PPD. A p-value of 0.05 was considered as significant. Odds ratios (OR) with 95% confidence intervals (95% CI) were calculated. Risk factors for PPD included 12 stressful life events such as previous depression, death of close family members, major illness or injury of family member, serious conflict between spouse, troubles with alcohol and illicit drug, partners having legal problem or arrested, partners losing their job, pregnancy by forced sexual relationship, experiencing physically abused by partner or ex-spouse, and having economic problem etc.

Results

Of the 1,731 eligible women, 94.1% were Buddhist, 93% were married, and 46% graduated secondary degree. Their mean age was 23.4 (SD ±4.76)

Table 1. Characters of new mothers and children (n = 1,731)

Characters	%
Religion	
Buddhism	94.1
Others	5.9
Marital status	
Married	92.9
Separated	2.2
Labor	
Normal	60.6
Cesarean section	36.1
Vacuum, breech	3.3
Marital conflict	
Severe	25.8
Planed pregnancy	
Intended	55.2
Economic burden	27.3
Maternal health	
Healthy	96.8
Child health	
Healthy	92.8
Bringing their child by themselves	73.1
Breast feeding	
Total	95.0
Breast feeding	
Exclusively	60.0

years (range: 13-44 years). Most of the participants gave birth by normal labor and 1/3 of them underwent cesarean section. The newborn average birth weight was 3,013.8 grams (ranging from 880 to 4,790 grams). Half of the mothers had expected their pregnancies. Most of the mothers were healthy (96.8%), brought up their children by themselves (73.1%), and gave breast feeding (95%) (Table 1). They got social support from their families especially when they faced some troubles. They felt safe within their families and had secure attachment within the family. Most of them got economic support from spouses or partners, parents of spouses', and their own.

The prevalence of PPD was reported to be by 8.4% (6.8% for teenagers aged less than 20 years, 7.8% for mothers aged 20 to 34 years, and 13.4% for women older than 35 years), and suicide idea among the depressed group was 9.4% (Table 2).

Factors associated with PPD were 1) maternal factors such as age, marital status, marital relationship, economic burden, maternal health, and unintended pregnancy, 2) children factors such as term of pregnancy, child health, and admission of the children, 3) child rearing such as breast feeding, 4) life events such as previous history of depression that needed help, economic burden, couples or partners lost their jobs, having been physically abused by partners or ex-spouses, or having debt or unable to pay the bills, and 5) support system such as spouse assistance for child rearing and financial support (Table 2, 3).

Table 2. Weighted proportions of characters of women and children among depressed and non depressed women (n = 1,731)

Characteristics	PPD (n = 145), n (%)	No PPD (n = 1,586), n (%)	X^2	p-value
Age				
Under 20 years	19 (6.8)	259 (93.2)	8.717	0.013
20-34 years	96 (7.8)	1,133 (92.2)		
>35 years	30 (13.4)	194 (86.6)		
Marital status				
Separation/divorced	7 (17.5)	33 (82.5)	17.324	0.001
Married, co-habitant	137 (8.1)	1,545 (91.9)		
Marital conflict				
Severe conflict	70 (15.9)	370 (84.1)	45.404	0.000
No/little	71 (5.6)	1,191 (94.4)		
Economic burden				
Insufficient	75 (15.9)	397 (84.1)	48.695	0.000
Sufficient	69 (5.5)	1,189 (94.5)		
Maternal health				
Not healthy	16 (29.1)	39 (70.9)	32.105	0.000
Healthy	128 (7.6)	1,547 (92.4)		
Planed pregnancy				
Unintended	87 (10.9)	714 (89.1)	14.335	0.000
Intended	52 (5.8)	843 (94.2)		
Term of pregnancy				
Preterm	36 (12.4)	255 (87.6)	7.716	0.021
Term	108 (7.5)	1,326 (92.5)		
Post-term	1 (4.3)	22 (95.7)		
Child health				
Not healthy	24 (19.2)	101 (80.8)	20.564	0.000
Healthy	121 (7.5)	1,485 (92.5)		
Admission of children more than 1 week				
Yes	28 (13.4)	181 (86.6)	8.102	0.004
No	115 (7.6)	1,398 (92.4)		
Breast feeding				
Yes	128 (7.8)	1,515 (92.2)	15.258	0.000
No	17 (19.8)	69 (80.2)		

PPD = postpartum depression

Table 3. Weighted proportions of SLEs in the 12 months prior to birth and support system among depressed and non depressed women (n = 1,731)

Factors	PPD (n = 145) n (%)	No PPD (n = 1,586) n (%)	X^2	p-value
Stressful life events				
Previous history of depression which needed help				
Yes	63 (17.1)	306 (82.9)	46.281	0.000
No	82 (6.0)	1,281 (94.0)		
Couple/partners lost their jobs				
Yes	36 (13.2)	236 (86.8)	7.641	0.002
No	109 (7.5)	1,351 (92.5)		
Having been physically abused by partner/spouse				
Yes	33 (16.1)	172 (83.9)	18.092	0.000
No	112 (7.3)	1,415 (92.7)		
Having debt or could not pay the bill				
Yes	32 (11.5)	246 (88.5)	4.209	0.030
No	113 (7.8)	1,338 (92.2)		
Family support				
Spouse assistance for child rearing				
No	52 (13.2)	343 (86.8)	15.352	0.000
Yes	89 (6.9)	1,208 (93.1)		
Financial support from spouse				
No	44 (13.9)	272 (86.1)	15.546	0.000
Yes	93 (7.1)	1,222 (92.9)		
Family support when they faced some troubles				
A little	116 (44.1)	147 (55.9)	89.078	0.000
A lot	263 (17.9)	1,202 (82.1)		
Felt safe within their families				
A little	74 (57.8)	54 (42.2)	104.669	0.000
A lot	303 (19.0)	1,294 (81.0)		
Family secure attachment				
A little	67 (71.2)	27 (28.7)	140.417	0.000
A lot	314 (19.2)	1,322 (80.8)		

Table 4 describes associated factors for major postpartum depression. By enter model of logistic regression, the women with severe marital conflict showed 1.8 times higher risk of having depression than those without conflict. Women with economic burden and poor maternal health had respectively associated with 2.0 and 3.4 times higher risk than women with no such factors. New mothers who had a previous history of depression that needed help, or had been physically abused by partners or ex-spouse associated respectively with 2.8 and 2.3 times higher risk to develop depression. While family supports and family secure attachment associated with lower risk of having depression respectively 0.5 and 0.3 times.

Discussion

The present study investigated the prevalence and characteristics of major PPD among Thai women. The national prevalence rate of major PPD was 8.4%. The present study found that the prevalence rate for PPD was similar to a previous report at local level (9.5%)[12] and the Canadian study[17]. This prevalence was found to be higher than that in other countries such as Australia (4.8%)[17], and Hong Kong (5.5%)[18], but lower than that found in Piyasilp's (23%)[19] and Miller RL's study (25%)[20]. The combined point prevalence estimated by meta-analysis range from 6.5% to 12.9%[21]. The difference in PPD prevalence rates may be due to cross-cultural variables, screening methods, the perception of mental health and its stigma, or socio-economic backgrounds[2]. However, by using the same screening tool, the difference in prevalence rate of depression may depend on cut-off point score and cultural background.

There were several validation studies of the EPDS which showed marked heterogeneity between different studies[15]. Gibson used cut-off point of 9-10 for possible PPD, 12-13 for probable PPD and

Table 4. Associated factors for PPD by using multivariate logistic regression and reporting adjusted odds ratio and 95% confidence interval

Factors	AOR	95% CI		p-value
		Lower	Upper	
Marital conflict	1.80	1.21	2.69	0.004
Economic burden	1.96	1.32	2.90	0.001
Maternal health	3.44	1.69	7.00	0.001
Child health	2.37	1.36	4.15	0.003
Previous history of depression	2.84	1.86	4.32	0.000
Having been physically abused by partner	2.27	1.19	4.33	0.013
Family support when they faced some troubles	0.54	0.33	0.87	0.012
Family secure attachment	0.28	0.15	0.50	0.000

Adjusted for other covariate in enter model
AOR = adjusted odds ratio

14-15 for ante-partum depression in his systematic review. He found that sensitivity results ranged from 34 to 100% and specificity from 44 to 100%. There is a wide variation across different settings in sensitivity, specificity. The two Thai EPDS validity studies gave different cut-off points (12-13[16] and 6-7[22]). The author used a score of 12-13 to detect major PPD in the present study.

The higher prevalence rate of PPD in this study was observed in the older group rather than in younger group, conflicting with other studies[23].

The present study found that the maternal factors associated with postpartum depression were unintended pregnancy, poor maternal health, and previous history of depression, which were similar to Nakku, Yellard and Vesga-Lopez[24-26] finding. The stressful life events, such as marital conflict and having been physically abused by a partner or ex-spouse were found to be associated with PPD similarly to finding in other studies[27].

Good family support was found to be protective factor in the present study. Social support system has been found in both the buffering hypothesis and in a direct effect hypothesis of social support for depression[28]. However, there was a widely disputed issue concerning whether social support would serve only as a protective or buffering function against the effects of stressful life events or whether social support also enhanced mental health under the conditions of both high and low stress[28].

Limitation of the present study was the site of data collection that collected data only from provincial hospital. Many of the new mothers who gave birth at a provincial hospital freely received postpartum follow up at convenient services such as a private clinic and primary health care unit. This population may not have represented all women at six to eight weeks post-delivery.

Conclusion

The national prevalence rate of major PPD between six and eight weeks after delivery was 8.4%. Factors associated with PPD were marital conflict, maternal and child health, economic burden, previous history of depression that needed help, and having been physically abused by partner or ex-spouse. Protective factor for PPD was family support.

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Potential conflicts of interest

None.

References

1. Bundhamcharoen K, Odton P, Phulkerd S, Tangcharoensathien V. Burden of disease in Thailand: changes in health gap between 1999 and 2004. BMC Public Health 2011; 11: 53. doi: 10.1186/1471-2458-11-53.
2. Lanes A, Kuk JL, Tamim H. Prevalence and characteristics of postpartum depression symptomatology among Canadian women: a cross-sectional study. BMC Public Health 2011; 11: 302. doi: 10.1186/1471-2458-11-302.

3. Sit DK, Wisner KL. Identification of postpartum depression. Clin Obstet Gynecol 2009; 52: 456-68.
4. Dennis CL, Janssen PA, Singer J. Identifying women at-risk for postpartum depression in the immediate postpartum period. Acta Psychiatr Scand 2004; 110: 338-46.
5. American Psychiatric Associations. Diagnostic and statistical manual of mental disorders. 4th ed. Washington, DC: American Psychiatric Associations Press; 1994.
6. Murray L, Cooper PJ. Postpartum depression and child development. Psychol Med 1997; 27: 253-60.
7. Logsdon MC, Wisner KL, Pinto-Foltz MD. The impact of postpartum depression on mothering. J Obstet Gynecol Neonatal Nurs 2006; 35: 652-8.
8. O'Hara MW. Postpartum depression: what we know. J Clin Psychol 2009; 65: 1258-69.
9. Boyce P, Stubbs J, Todd A. The Edinburgh Postnatal Depression Scale: validation for an Australian sample. Aust N Z J Psychiatry 1993; 27: 472-6.
10. O'Hara MW, Swain AM. Rates and risk of postpartum depression—a meta-analysis. Int Rev Psychiatry 1996; 8: 37-54.
11. Pitanupong J, Vacharaporn K. Prevalence and predictors of postpartum depression in Songklanagarind Hospital. Songkla Med J 2005; 23: 249-54.
12. Srisutasanawong A. Prevalence and risk factors of postpartum depression in Maharaj Nakorn Chiang Mai Hospital. Chiang Mai: Chiang Mai University; 2008.
13. Petpornprapas E, Lotrakul M. Postpartum depression: its relationship to childbirth and child health at Ramathibodi Hospital. J Psychiatr Assoc Thai 2009; 54: 29-36.
14. Wilson LM, Reid AJ, Midmer DK, Biringer A, Carroll JC, Stewart DE. Antenatal psychosocial risk factors associated with adverse postpartum family outcomes. CMAJ 1996; 154: 785-99.
15. Gibson J, McKenzie-McHarg K, Shakespeare J, Price J, Gray R. A systematic review of studies validating the Edinburgh Postnatal Depression Scale in antepartum and postpartum women. Acta Psychiatr Scand 2009; 119: 350-64.
16. Vacharaporn K, Pitanupong J, Samangsri N. Development of the Edinburgh Postnatal Depression Scale Thai version. J Mental Health Thai 2003; 11: 164-9.
17. Dennis CL, Heaman M, Vigod S. Epidemiology of postpartum depressive symptoms among Canadian women: regional and national results from a cross-sectional survey. Can J Psychiatry 2012; 57: 537-46.
18. Lee DT, Yip SK, Chiu HF, Leung TY, Chan KP, Chau IO, et al. Detecting postnatal depression in Chinese women. Validation of the Chinese version of the Edinburgh Postnatal Depression Scale. Br J Psychiatry 1998; 172: 433-7.
19. Piyasil V. Anxiety and depression in teenage mothers: a comparative study. J Med Assoc Thai 1998; 81: 125-9.
20. Miller RL, Pallant JF, Negri LM. Anxiety and stress in the postpartum: is there more to postnatal distress than depression? BMC Psychiatry 2006; 6: 12. doi:10.1186/1471-244X-6-12.
21. Gavin NI, Gaynes BN, Lohr KN, Meltzer-Brody S, Gartlehner G, Swinson T. Perinatal depression: a systematic review of prevalence and incidence. Obstet Gynecol 2005; 106: 1071-83.
22. Pitanupong J, Liabsuetrakul T, Vittayanont A. Validation of the Thai Edinburgh Postnatal Depression Scale for screening postpartum depression. Psychiatry Res 2007; 149: 253-9.
23. Nonacs R, Cohen LS. Assessment and treatment of depression during pregnancy: an update. Psychiatr Clin North Am 2003; 26: 547-62.
24. Nakku JE, Nakasi G, Mirembe F. Postpartum major depression at six weeks in primary health care: prevalence and associated factors. Afr Health Sci 2006; 6: 207-14.
25. Yellard J, Sutherland G, Brown SJ. Postpartum anxiety, depression and social health: findings from a population-based survey of Australian women. BMC Public Health 2010; 10: 771. doi: 10.1186/1471-2458-10-771.
26. Vesga-Lopez O, Blanco C, Keyes K, Olfson M, Grant BF, Hasin DS. Psychiatric disorders in pregnant and postpartum women in the United States. Arch Gen Psychiatry 2008; 65: 805-15.
27. Beck CT. A meta-analysis of predictors of post-partum depression. Nurs Res 1996; 45: 297-303.
28. Cutrona CE. Social support and stress in the transition to parenthood. J Abnorm Psychol 1984; 93: 378-90.

ความชุกของภาวะซึมเศร้าหลังคลอดในหญิงไทย: การสำรวจระดับชาติ

เบญจพร ปัญญายง

วัตถุประสงค์: *เพื่อศึกษาความชุกและปัจจัยที่เกี่ยวข้องกับภาวะซึมเศร้าหลังคลอดของหญิงไทย*
รูปแบบการศึกษา: *การศึกษาเชิงพรรณนาแบบตัดขวาง, การสำรวจระดับชาติ*
วัสดุและวิธีการ: *การศึกษาในผู้หญิงหลังคลอด จำนวนทั้งสิ้น 1,731 คน ตอบแบบสอบถามด้วยตนเองที่ประกอบด้วยข้อมูลทั่วไป ข้อมูลการคลอด สุขภาพมารดาและทารก ภาวะกดดันทางสังคมใน 12 เดือนที่ผ่านมา และการสนับสนุนทางสังคม การประเมินภาวะซึมเศร้าหลังคลอดด้วยเครื่องมือ the Edinburgh Postnatal Depression Scale ฉบับภาษาไทย จำนวน 10 ข้อ ในการศึกษาความชุกและปัจจัยที่เกี่ยวข้องกับภาวะซึมเศร้าหลังคลอดของหญิงไทย*
ตัวชี้วัดที่สำคัญ: *ความชุกของภาวะซึมเศร้าหลังคลอด*
ผลการศึกษา: *ความชุกของภาวะซึมเศร้าหลังคลอด ร้อยละ 8.4 ปัจจัยที่เกี่ยวข้องกับภาวะซึมเศร้า ได้แก่ สุขภาพมารดา ความขัดแย้งระหว่างคู่สมรส ความพอเพียงของรายได้ และความกดดันทางสังคมของหญิงหลังคลอด เช่น ประวัติ ซึมเศร้าใน 12 เดือนที่ผ่านมา ส่วนการสนับสนุนทางสังคมเป็นปัจจัยป้องกันภาวะซึมเศร้า*
สรุป: *ความชุกของภาวะซึมเศร้าหลังคลอดในหญิงไทยพบประมาณ ร้อยละ 8.4 ข้อมูลนี้มีความสำคัญสำหรับการคัดกรองปัญหาการประเมินปัญหาสุขภาพจิตภายหลังคลอดและการดูแลช่วยเหลือที่จะลดความชุกของภาวะซึมเศร้าหลังคลอด และผลกระทบจากภาวะซึมเศร้า*