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Prevalence of Postpartum Psychological Distress in Siriraj Hospital

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Abstract : **The objectives of this study were to determine the prevalence of and factors associated with postpartum psychological distress. This study was designed as a descriptive, prospective study set in the postpartum wards of the Department of Obstetrics and Gynaecology, Faculty of Medicine Siriraj Hospital, Mahidol University. A total of 275 postpartum women were admitted to the postpartum wards at Siriraj Hospital. The 12-item Goldberg Health Questionnaire, Thai edition (12-item Thai GHQ), was used to interview each subject during the first 48 hours after delivery. Postpartum psychological distress was diagnosed when the 12-item Thai GHQ score was ≥ 2. Of 275 postpartum women included in this study, the prevalence of psychological distress was found to be 34.2% (95% CI 28.7-40.2). Significant associated risk factors, as determined by logistic regression analysis, included age > 35 years old (adjusted OR 8.58, 95% CI 2.24-32.84), fair husband relationship (adjusted OR 2.00, 95% CI 1.11-3.57), poor husband relationship (adjusted OR 4.00, 95% CI 1.76-9.08), and poor family support (adjusted OR 5.40, 95% CI 1.34-21.70). Our findings indicated that the prevalence of postpartum psychological distress in Siriraj Hospital was 34.2%. Significant risk factors included age over 35 years old, fair to poor husband relationship and poor family support during pregnancy. Understanding such risks might lead to the development of preventive measures for the condition, as well as early diagnosis and treatment to reduce the severity among high-risk or affected women. Further studies are required for more extensive exploration of this condition.**

Key words : Postpartum psychological distress, prevalence, associated risk factors.

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เรื่องย่อ : **ความชุกของภาวะผิดปกติทางจิตประสาทในผู้ป่วยหลังคลอดในโรงพยาบาลศิริราช**

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การศึกษานี้มีวัตถุประสงค์เพื่อหาความชุกของภาวะผิดปกติทางจิตประสาทในผู้ป่วยหลังคลอดในโรงพยาบาลศิริราช และปัจจัยที่สัมพันธ์กับการเกิดภาวะนี้เป็นการวิจัยเชิงพรรณนา และศึกษาในหอผู้ป่วยหลังคลอด ภาควิชาสูติศาสตร์-นรีเวชวิทยา คณะแพทยศาสตร์ศิริราชพยาบาล มหาวิทยาลัยมหิดล กลุ่มผู้ป่วยหลังคลอดที่ศึกษามีจำนวน 275 ราย เป็นผู้ป่วยที่รับไว้ในหอผู้ป่วยหลังคลอด โรงพยาบาลศิริราช ในช่วงตั้งแต่ 1 กรกฎาคม - 31 สิงหาคม 2545 ผู้ป่วยหลังคลอดถูกเก็บข้อมูลโดยให้ตอบแบบสอบถามภายใน 48 ชั่วโมงหลังคลอด โดยใช้แบบสอบถาม The 12-item Goldberg Health Questionnaire, Thai edition (12-item Thai GHQ) ในการวินิจฉัยภาวะผิดปกติทางจิตประสาท โดยมีเกณฑ์การวินิจฉัยเมื่อได้คะแนนตั้งแต่ 2 คะแนนขึ้นไป ผลการวิจัยพบว่าผู้ป่วยหลังคลอดในโรงพยาบาลศิริราชมีพบความชุกของภาวะผิดปกติทางจิตประสาท ร้อยละ 34.2 (95% CI 28.7-40.2) โดยมีปัจจัยที่สัมพันธ์กับการเกิดภาวะนี้ คือ อายุมากกว่า 35 ปี โดยมี adjusted odds ratio 8.58 (95% CI 2.24-32.84) ความสัมพันธ์กับสามีระดับปานกลางและไม่ดี โดยมี adjusted odds ratio 2.00 (95% CI 1.11-3.57) และ 4.00 (95% CI 1.76-9.08) ตามลำดับ และการสนับสนุนดูแลที่ไม่ดีของครอบครัว โดยมี adjusted odds ratio 5.40 (95%CI 1.34-21.70)

โดยสรุปความชุกของภาวะผิดปกติทางจิตประสาทในผู้ป่วยหลังคลอดโรงพยาบาลศิริราชมีค่าร้อยละ 34.2 ปัจจัยที่สัมพันธ์กับการเกิดภาวะนี้ ได้แก่ อายุมาก ปัญหาความสัมพันธ์กับสามี และการสนับสนุนดูแลที่ไม่ดีของครอบครัว ผลการวิจัยนี้อาจใช้เป็นข้อมูลพื้นฐานสำหรับการศึกษาภาวะผิดปกติทางจิตประสาทในหญิงตั้งครรภ์ เพื่อพัฒนาวิธีป้องกันภาวะนี้ในกลุ่มผู้ป่วยที่มีปัจจัยเสี่ยง ตลอดจนวิธีตรวจค้นเพื่อวินิจฉัยให้ได้ตั้งแต่ระยะเริ่มแรกและให้การรักษาเพื่อลดความรุนแรงของอาการผิดปกติทางจิตประสาทที่เกิดขึ้นต่อไป

INTRODUCTION

Postpartum psychological distress is defined as a state of anxiety, decreased interest in one's environment and psychomotor symptoms including depression and hallucination that occurs in the 1-year postpartum period.[1,2] Postpartum psychological distress includes postpartum "blues", postpartum depression and postpartum psychosis.[1] Postpartum "blues"[1,3] is related to the environment and the basic psychological status of the patient. Postpartum depression[1,4,5] is found in about 8-15% of postpartum women[1,6] and occurs primarily in the first 2-3 days of the postpartum period. An associated risk factor is previous depressive illness, and the recurrence rate is 50-70%.[1,4,5] The incidence of postpartum psychosis is 0.1-0.4% and occurs primarily in cases of previous depression.[1,4,7] Postpartum psychological distress can occur in pregnant women which can lead to further family and social problems. This preliminary study was attempted to determine the prevalence and associated risk factors of postpartum psychological distress in order to develop a method of early

diagnosis and treatment to decrease the severity of the disease.

MATERIALS AND METHODS

This was a descriptive prospective study, set in the postpartum wards of the Department of Obstetrics and Gynaecology, Siriraj Hospital, Mahidol University, Bangkok, Thailand. A total of 275 postpartum women were admitted to the postpartum wards at Siriraj Hospital. Women who had any obstetric, medical, surgical or psychological complications during pregnancy or neonatal mortality and morbidity after delivery were excluded from the study.

The 12-item Goldberg Health Questionnaire, Thai edition (12-item Thai GHQ),[8,9] was used to interview each subject during the first 48 hours after delivery. The women could ask the researcher if they had any questions or difficulty completing the questionnaire. If they were unable to read Thai, the researcher read the questionnaire out loud to them until they understood and answered the questions. Postpartum psychological distress was diagnosed when the 12-item Thai GHQ score was ≥ 2 from a possible total of 12.

Statistical analysis

The basic data were analyzed for percentage, mean and standard deviation. The association between basic data and the interesting risks were analyzed by univariate analysis (student's t-test and Chi-square test). Independent risk factors related to postpartum psychological distress were analyzed by multivariate analysis (multiple logistic regression analysis).

RESULTS

A total of 275 postpartum women during July 1st to August 31st, 2002 were included. Basic biographical data of the patients are shown in Table 1.

Table 1. Basic biographical data of the postpartum women.

Data	Number (%)
Age	
< 20 years	32 (11.7)
20 - 35 years	222 (80.7)
> 35 years	21 (7.6)
Number of parity	
1	153 (55.6)
2	88 (32.0)
≥ 3	34 (12.4)
Education level	
Primary school or lower level	98 (35.6)
Secondary school	92 (33.4)
University or upper level	85 (31.0)
Occupation	
Labourer or office worker	122 (44.4)
Government worker	15 (5.4)
Merchant	87 (31.6)
Housewife	87 (31.5)
Others	17 (6.2)
Income of family (Baht/month)	
< 5,000	94 (34.2)
5,000 - 10,000	97 (35.3)
10,001 - 20,000	51 (18.5)
> 20,000	33 (12.0)

The mean age of the postpartum women was 27.22 ± 6.01 years old, with a range of 20-35 years old. 56% of the women had a first parity and 32% a second. The educational levels were equally randomized from primary school to university level. Most of them were labourers or office workers and housewives. Most of families had an income of less than 10,000 Baht/month.

Table 2. Family and social factors of postpartum women.

Data	Number (%)
Desire for this child	
Wanted child	114 (41.5)
Unwanted child	161 (58.5)
Preparedness of pregnancy	
Prepared	261 (94.9)
Not prepared	14 (5.1)
Family characteristics	
Lived with her family or family of her husband	132 (48)
Lived with only her husband	137 (49.8)
Lived alone	6 (2.2)
Family support	
Good	201 (73.1)
Fair	63 (22.9)
Poor	11 (4)
Relationship with her husband	
Good	123 (44.7)
Fair	116 (42.2)
Poor	36 (13.1)
Husband care	
Good	237 (86.2)
Fair	29 (10.5)
Poor	9 (3.3)

From Table 2, the pregnancies with an unwanted child were slightly higher than those with a wanted child. Most women were prepared for pregnancy. The women's relationship with their husbands were mostly good and fair, a few related poor (13%). Most women (86%) received good care from their husbands. Half of the women lived with their husbands while 48% stayed with their families or their husbands' families. Only 2% stayed alone. Most of the women (73%) had good family support.

Table 3. Delivery and neonatal factors of postpartum women.

Data	Number (%)
Type of delivery	
Normal labour	183 (66.5)
Caesarean section	86 (31.3)
Breech delivery, forceps or vaccuum extraction	6 (2.2)
Neonatal complication with the need of neonatal intensive care unit	
Yes	30 (10.9)
No	245 (89.1)

From Table 3, most women had a normal delivery; the caesarean section rate was 31% and other methods of delivery occurred in 2% of cases. About 11% of the women delivered babies with neonatal complications that required intensive care. These complications included meconium aspiration syndrome, sepsis and neonatal jaundice.

The data indicating the prevalence of psychological distress in postpartum women according to the 12-item Goldberg Health Questionnaire, Thai edition (12-item Thai GHQ), are presented in Table 4.

Table 4. Score results from the 12-item Goldberg Health Questionnaire.

Score from 12-item Thai GHQ	Number (%)
0	132 (48.0)
1	49 (17.8)
2	37 (13.5)
3	22 (8.0)
4	15 (5.4)
5	4 (1.5)
6	6 (2.2)
7	3 (1.1)
8	2 (0.7)
9	1 (0.4)
10	2 (0.7)
11	2 (0.7)

From Table 4, 132 from 275 of the postpartum pregnant women (48%) had the lowest score (0) and 2 of the 275 women screened (0.7%) had the maximum score (11). Postpartum psychological distress was diagnosed when the 12-item Thai GHQ score was ≥ 2 which was found in 94 postpartum women. The prevalence of postpartum psychological distress was about 34.2% (95% CI = 28.7 - 40.2).

Associated risk factors for postpartum psychological distress were studied as shown in Table 5.

From Table 5, the primary risk factor associated with postpartum distress as determined by logistic regression analysis was higher mean age (28.44 ± 6.37 years); most women were over 35 years old. Parity, education level, occupation and income of family were not significantly associated with the risk of postpartum psychological distress.

From Table 6, significant risk factors associated with postpartum psychological distress included poor family support, poor husband relationship and fair to poor care from the woman's husband.

From Table 7, type of delivery and the presence of neonatal complication were not risk factors with postpartum psychological distress.

In order to decrease the problem of confounding factors related to postpartum psychological distress, multiple logistic regression was used to analyzed the data as shown in Table 8.

From Table 8, when multiple logistic regression was used, the significant associated risk factors for postpartum psychological distress included age > 35 years (adjusted odds ratio 8.58), fair to poor husband relationship (adjusted odds ratio 2.00 and 4.00) and poor family support (adjusted odds ratio 5.40).

DISCUSSION

Various studies showed that the prevalence of postpartum psychological distress was found in about 1/3 of all postpartum women[2,10,11,12-14] ranging in degree of severity from postpartum blues to depression and psychosis. Associated risk factors

Table 5. Comparison of biographical data of women with and without postpartum psychological distress.

Data	Number (%) of women		P value*
	with psychological distress	without psychological distress	
Mean age (mean ± SD)	28.44 ± 6.37 years	26.59 ± 5.73 years	0.015**
Age group			
< 20 years	6 (6.4)	26 (14.4)	0.005
20-35 years	75 (79.8)	147 (81.2)	
> 35 years	13 (13.8)	8 (4.4)	
Parity			
First	46 (48.9)	107 (59.1)	0.097
Second	38 (40.4)	50 (27.6)	
Third or over	10 (10.6)	24 (13.3)	
Education level			
Primary school or lower	27 (28.7)	71 (39.2)	0.218
Secondary school	34 (36.2)	58 (32.1)	
University or over	33 (35.1)	52 (28.7)	
Occupation			
Labourer or office worker	48 (51.1)	74 (40.9)	0.297
Government worker	6 (6.4)	9 (5.0)	
Merchant	12 (12.8)	22 (12.2)	
Housewife	25 (26.60	62 (34.2)	
Others	3 (3.2)	14 (7.7)	
Income of family (Baht/month)			
< 5,000	27 (28.7)	67 (37.0)	0.374
5,000 - 10,000	34 (36.2)	67 (37.0)	
10,001 - 20,000	20 (21.3)	27 (14.9)	
> 20,000	13 (13.8)	20 (11.1)	

*Chi-square test, **Students t-test.

were found to be previous history of psychological distress[8] and severe maternal and neonatal complications.[10] Moreover physical changes in pregnancy that result in weakness and shame may further increase the likelihood of experiencing postpartum psychological distress if the women already had other risk factors.[5] Kendell et al[9] concluded that physical characteristics were predisposing factors while psychosocial characteristics were precipitating factors of postpartum psychological distress. Ninety percent of postpartum psychological distress occurred during the first few days of the postpartum period.[1,4,5]

From this study, the prevalence of postpartum psychological distress was 34.2% (95% CI = 28.7-40.2) and associated risk factors were age > 35 years, poor husband relationship, poor family support and poor care from husband. The prevalence of postpartum psychological distress found in this study was similar to the results of studies by Patrizia and Maria-Josephe in Europe[12], Gierdingen and Chaloner in America[15] and Astbury et al in Australia.[16] Even though the studied populations were different, they all included general postpartum women without severe maternal and neonatal complications. In conclusion, the differences in culture, geography and

Table 6. Comparison of family and social risk factors as related to the state of postpartum psychological distress.

Data	Number (%) of women		P value*
	with psychological distress	without psychological distress	
Desired of pregnancy			
Wanted	32 (34.0)	82 (45.3)	0.072
Unwanted	62 (66.0)	99 (54.7)	
Preparedness of pregnancy			
Prepared	86 (91.5)	175 (96.7)	0.063
Not prepared	8 (8.5)	6 (3.3)	
Family characteristics			
Stayed with her family husband's family	44 (46.8)	88 (48.6)	0.701
Stayed with husband only	47 (50.0)	90 (49.7)	
Stayed alone	3 (3.2)	3 (1.7)	
Family support			
Good	63 (67.0)	138 (76.2)	0.017
Fair	23 (24.5)	40 (22.1)	
Poor	8 (8.5)	3 (1.7)	
Relationship with husband			
Good	31 (33.0)	92 (50.8)	0.002
Fair	43 (45.7)	73 (40.3)	
Poor	20 (21.30	16 (8.9)	
Care from her husband			
Good	73 (77.7)	164 (90.6)	0.009
Fair	17 (18.1)	12 (6.6)	
Poor	4 (4.3)	5 (2.8)	

*Chi-square test.

Table 7. Comparison of the methods of delivery and neonate factors as related to the prevalence of postpartum psychological distress.

Data	Number (%) of women		P value*
	with psychological distress	without psychological distress	
Type of delivery			
Normal labour	64 (68.1)	119 (65.7)	0.645
Caesarean section	29 (30.8)	57 (31.5)	
Breech delivery	1 (1.1)	5 (2.8)	
Forceps or vaccuum extraction			
Neonatal complication needing intensive care unit treatment			
Yes	14 (14.9)	16 (8.8)	0.127
No	80 (85.1)	165 (91.2)	

*Chi-square test.

Table 8. Factors associated postpartum psychological distress when multiple logistic regression analysis was used.

Associated factors	Adjusted odds ratio	95% CI
Age (years)		
< 20	1.00	
20-35	2.39	0.90 - 6.36
> 35	8.58	2.24 - 32.84
Relationship with her husband		
Good	1.00	
Fair	2.00	1.11 - 3.57
Poor	4.00	1.76 - 9.08
Family support		
Good	1.00	
Fair	0.78	0.40 - 1.51
Poor	5.40	1.34 - 21.70

social environment made no difference in anxiety and tension levels during pregnancy and delivery.

When multiple logistic regression analysis was used, associated risk factors included age > 35 years, fair and poor husband relationship, poor family support. The risk of postpartum psychological distress in women aged > 35 years was 8.58 times greater than those aged < 20 years. The risk of postpartum psychological distress for women who had fair and poor husband relationships were 2 and 4 times greater than those with good husband relationships. The risk of postpartum psychological distress for women who had poor family support was 5.4 times greater than those with good family support. All the above data correlated well with the studies Kumar and Robson[17] and Unterman et al.[10] Moreover unplanned pregnancy and family financial problems were also associated with the risk of postpartum psychosis. Astbury et al[16] found that formula milk feeding and dissatisfaction with antenatal care were also risk factors of postpartum psychosis.

The differences in the results of the many studies done on this subject may be due to differences in standards of living, family life-style, the women's ages at the time of marriage and bonding related to breast-feeding as discussed above. The Goldberg Health Questionnaire is the standard measurement tool which has been used around the world to evaluate psychological distress since 1997.[18] The Thai edition (12-item Thai GHQ) is a short form that produces good accuracy. It is easy to understand, takes a short time to evaluate, is easy to determine the results and appropriate for use with a large population.

In conclusion, this study showed that the prevalence of postpartum psychosis was high and most of the associated risk factors were preventable. All basic data can be used in a further study in order to develop a method of early diagnosis and treatment so that the severity of postpartum psychological distress can be minimized. Ultimately, this will produce positive results for the pregnancy, the child, the family, and society.

REFERENCES

1. สมภพ เรืองตระกูล, อรพรรณ ทองแตง. โรคทางจิตเวชในผู้ป่วยสูติศาสตร์นรีเวชวิทยา. ใน: สมภพ เรืองตระกูล, เยียรชัย งามทิพย์วัฒนา, สุชีรา ภัทรายุตวรรตน์, บรรณาธิการ. ตำราจิตเวชศาสตร์ พิมพ์ครั้งที่ 7. กรุงเทพมหานคร: โรงพิมพ์เรือนแก้วการพิมพ์, 2544: 239-43.
2. Pop V, Essed G. Prevalence of postpartum depression : or is it postpartum depression? Act Obstet Gynaecol Scand 1977; **72:** 354-58.
3. Cunningham FG, Gant NF, Leveno KJ, Gillstrap III LC, Wenstrom KD. Care of the mother during the puerperium. In : Cunningham FG, Gant NF, Leveno KJ, Gilstrap III LC, Hauth JC, Wenstrom KD, eds.

Williams obstetrics. 21st ed. New York: McGraw-Hill; 2001: 415-21.
4. Cunningham FG, Gant NF, Leveno KJ, Gillstrap III LC, Wenstrom KD. Psychiatric disorders. In: Cunningham FG, Gant NF, Leveno KJ, Gilstrap III LC, Hauth JC, Wenstrom KD, eds. Williams obstetrics. 21st ed. New York: McGraw-Hill; 2001: 1419-27.
5. Harold IK, Benjamin JS. Depressive disorders. In: Harold IK, Benjamin JS, eds. Kaplan and Sadock's synopsis of psychiatry: behavioral sciences, clinical psychiatry. 8th ed. Maryland: Lippincott Williams & Wilkins; 1998: 525-38.
6. สมภพ เรืองตระกูล, อรพรรณ ทองแตง. โรคทางจิตเวชในผู้ป่วยสูติศาสตร์นรีเวชวิทยา. ใน: สมภพ เรืองตระกูล, เธียรชัย งามทิพย์วัฒนา, สุชีรา ภัทรายุตวรรตน์, บรรณาธิการ. ตำราจิตเวชศาสตร์ พิมพ์ครั้งที่ 6. กรุงเทพมหานคร: โรงพิมพ์เรือนแก้วการพิมพ์, 2542: 429-36.
7. Harold IK, Benjamin JS. Postpartum psychosis. In: Harold IK, Benjamin JS, eds. Kaplan and Sadock's synopsis of psychiatry: behavioral sciences, clinical psychiatry. 8th ed. Maryland: Lippincott Williams & Wilkins; 1998: 500-4.
8. Weissman MM, Olfson M. Depression in women: Implications for health care research. Science 1995; 269: 799-808.
9. Kendell RE, Wainwright S, Hailey A, Shannom B. The influence of childbirth on psychiatric morbidity. Psychol Med 1976; **6:** 297-302.
10. Unterman R, Posner N, Williams K. Postpartum depressive disorders: changing trends. Birth 1990; **17:** 131-37.
11. Cox J, Murray D, Chapman G. A controlled study of the onset, duration and prevalence of postnatal depression. Br J Psychiat 1993; **163:** 27-31.
12. Patrizia R, Marie-Josephe S. What makes new mothers unhappy? Psychological distress one year after birth in Italy and France. Social Sci Med 1999; **49:** 1624-51.
13. Cooper P, Campbell E. Non-psychotic psychiatric disorder after childbirth: a prospective study of prevalence, incidence, course and nature. Br J Psychiat 1988; **152:** 799-806.
14. Ballard C, Davis R. Prevalence of postnatal psychiatric morbidity in mothers and fathers. Br J Psychiat 1994; **164:** 782-88.
15. Gjerdingen D, Chaloner K. The relationship of women's postpartum mental health to employment, child-birth and social support. J Fam Prac 1994; **38:** 465-72.
16. Astbury J, Brown S, Lumley J, Small R. Birth events, birth experiences and social differences in postnatal depression. Aus J Pub Health 1994; **18:** 176-84.
17. Kumar R, Robson K. A prospective study of emotional disorders in child bearing women. Br J Psychiat 1984; **144:** 35-47.
18. Goldberg D, Gater R. The validity of two versions of the GHQ in the WHO study of mental illness in general health care. Psycho Med 1997; **27:** 191-97.