
OBSTETRICS

Prevalence of Postpartum Mental Health Problem in Siriraj Hospital

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ABSTRACT

Objective: To study the prevalence of postpartum mental health problem (postpartum MHP).

Study design: Cross-sectional descriptive study.

Materials and Methods: The 260 women in the first 48 hrs postpartum of > 24 weeks of gestation who were admitted at the postpartum ward, Siriraj Hospital during May 8th to August 2nd, 2008 were enrolled. After consent forms were done, they were asked to complete self-administered questionnaire including Thai GHQ-30 (mental health problem screening tool) and frequent psychosocial stressor forms.

Main outcome measurement: Percentage of the positive Thai GHQ-30/ or probable of mental health problem.

Results: The prevalence of postpartum mental health problem was 28.8%. There were statistic significances in some demographic and socioeconomic status: worrying about baby care, quantity of breast milk, number of marriage and postpartum complications, with adjusted OR 3.24 (95%CI 1.68, 6.25), 2.62 (95%CI 1.37, 5.01), 3.68 (95%CI 1.46, 9.27), 3.38 (95%CI 1.29, 8.85), respectively (P<0.05). The prognostic factors of psychosocial stressors were worrying about pregnancy and delivery, financial problem and bad events in life, with adjusted OR 5.91 (95%CI 2.00, 17.51), 3.57 (95%CI 1.49, 8.56), 2.23 (95%CI 1.01, 4.90), respectively.

Conclusion: The prevalence of probable postpartum MHP was 28.8%. The prognostic factors of psychosocial stressors were worrying about pregnancy and delivery, financial problem and bad events in life.

Keywords: postpartum mental health problem, prevalence, prognostic factors

Introduction

Postpartum mental health problem (postpartum MHP) is one of the common problems in postpartum period. The former 31.9%⁽¹⁾ prevalence

of mental health problem in 3 days postpartum period seems to be increasing from the influences of globalization.

Pregnancy is a period of physiological,

hormonal, and psychological changes especially during postpartum period. In antepartum period, prenatal investigations (ultrasonography, amniocentesis) are effected to pregnant women. During labor, pregnant women may be worried about delivery process and pregnancy outcome and at the consecutive postpartum adjustment is also disturbed. These factors have direct impact on postpartum mental health.

The early detection of the problems may lead to the prevention and treatment of those at risk of postpartum MHP. The first 48 hours postpartum period was selected, hoping that the problem may be detected before discharge. We wanted to study the prevalence of postpartum MHP in the women who delivered at Siriraj Hospital. If it constitutes in high percentage of general health problem, the next step is the implementation of MHP screening in all cases during antenatal care.

Thai general health questionnaire-30 (Thai GHQ-30) is selected as the screening tool for detection of postpartum MHP which had been already approved by Department of Mental Health, Ministry of Public Health, Thailand.^(2,3)

Materials and Methods

The study design was cross-sectional descriptive study and was approved by Siriraj Ethics Committee. The sample size was calculated according to the formula $N = \frac{Z_{1-\alpha}^2 PQ}{d^2}$ (prevalence 31.9%⁽¹⁾, degree of accuracy desired 0.06), which was equal to 260 cases including 10 percent lost. The women delivered at Department of Obstetrics and Gynaecology, Siriraj Hospital between May 8th and August 2nd, 2008 were the study population. The inclusion criteria were the women in the first 48 hours postpartum and > 24 weeks gestation. The exclusion criteria were those with the history of psychiatric problems or during treatment and could not understand Thai language. The sample size was calculated by using the prevalence of PMHP from the study of Sappaudom S⁽¹⁾ which was done in Thai population within three days postpartum period.

After consent forms were signed, the

participants were asked to complete the Thai GHQ-30 which contains 2 parts. The first part- for researcher: were composed of general health and obstetric information. The second part- was the self answer questions which included 2 main topics. The first topic was used for screening of postpartum MHP (using Thai GHQ-30 Questionnaire). The second topic was used for assessing their risk factors.

The socio-demographic and obstetric information of the participants: maternal age, gestational age, marital status, education level, occupation, income, history of prior pregnancy, pregnancy intention, parity and associated or abnormal symptoms occurring during current pregnancy were collected from medical records by the researcher for analysis.

The Thai GHQ-30 score of > 4 meant positive for screening test (probable of postpartum MHP), while score < 4 meant negative for screening test. The convenient channel was arranged for the positive group to consult psychiatrists.

Statistical analysis

The collected data was analyzed using the statistical software package system (SPSS for window version 11.5, SPSS, Chicago, IL, USA). The main outcome measurement was prevalence of postpartum MHP. The other topic of interest was finding out risks of postpartum MHP of the participants. The student's t-test, Pearson's X² test, Fisher exact test or X² test were used to identify the association between the positive and negative groups in term of socio-demographic-obstetric factors and psychosocial stressors. The significant variables were further put into a logistic regression model to disclose any independent prognostic factors of MHP. A two-sided P value of less than 0.05 was declared as statistical significant.

Results

Of the 260 participants, 75 cases (28.8%) had Thai GHQ-30 scores > 4 which were labeled as positive group or possibility of mental health problem.

The 185 cases (71.2%) or negative group were those who had score ≤ 4 . So the prevalence of mental health problem in this study was 28.8%.

The details of the socio-demographic and obstetric characteristics were similar in both groups (Table 1 and Table 2). The mean age was 27 years old, gestational age 38 weeks and most of them were couple. The family income was less than 10,000 baht/month. Few of them had the experience of smoking, alcoholic drinking and drug addict. Most of them intended to be pregnant and had no abnormal symptom during pregnancy. Half of them were multiparity and receive pain relief during labor. Mode of delivery was mostly vaginal route.

Among 10 frequent psychosocial stressors (Table 3), only eight stressors: worrying about pregnancy and delivery, changes of body shape, difficulties with spouse partner/lover, stress of taking care of other family members, stress at working outside, financial problem, bad event in life and thinking or dreaming about terrible event, had been found more often in the positive group with statistic significance (P value < 0.05).

After logistic regression analysis of the statistic significant demographic and socioeconomic and obstetric variable: worrying about baby care, quantity of breast milk, number of marriage and postpartum complications, with their with adjusted OR were 3.24 (95%CI 1.68, 6.25), 2.62 (95%CI 1.37, 5.01), 3.68 (95%CI 1.46, 9.27), 3.38 (95%CI 1.29, 8.85), respectively ($P < 0.05$) (Table 4)

Logistic regression analysis of the frequent psychosocial stressors only three out of eight stressors: worrying about pregnancy and delivery, financial problem and bad events in life had the statistic significant ($P < 0.05$) with adjusted OR 5.91 (95%CI 2.00, 17.51), 3.57 (95%CI 1.49, 8.56), 2.23 (95%CI 1.01, 4.90), respectively (Table 5).

After putting all 5 statistic significant variables: demographic and socioeconomic and obstetric variable and also 8 frequent psychosocial stressors (Table 1, Table 2 and Table 3) into a logistic regression model, we disclosed only 5 variables: quantity of breast milk, worrying about pregnancy

and delivery, financial problem, postpartum complications and number of marriage with adjusted OR 4.1 (95% CI 2.0, 8.5), 4.9 (95% CI 1.9, 12.4), 6.4 (95% CI 2.1, 19.6), 3.9 (95% CI 1.3, 11.5) and 2.7 (95% CI 1.1, 7.1), respectively ($P < 0.05$) (Table 6).

Discussion

It is the fact that the pregnant women and new mothers experience more severe pressure, more psychosocial and marital problems when compare of a group of non-childbearing women. These may lead to MHP in some women. So studying of its prevalence may be useful and necessary. Discovering the size of problem will initiate the obstetricians to realize the importance of mental health screening to be a part of postpartum care service.

We selected Thai GHQ-30 as the screening tool for MHP because of its superiority and simplicity. It was also audited in Thai citizen with the sensitivity and specificity of 81.8% and 89.7%, respectively.⁽²⁾ The Thai GHQ score of > 4 means positive test or probable of postpartum MHP. Among 260 participants it was found that 75 cases (28.8%) had positive screening test (probability of having postpartum MHP). This finding is similar to the 31.9% of the previous study.⁽¹⁾

We also included a part of patient health questions (PHQ) to assess the existing risk factors of postpartum women both the frequent and psychosocial stressors. Amongst the socio-demographic and obstetric characteristic (Table 1 and table 2) it was recorded that the significant items were: worrying about baby care, quantity of breast milk, number of marriage and postpartum complications and adaptation which similar to previous studies.^(1,4-7)

In contrary to many previous researches^(8,9), we found no association concerning smoking, illicit drug usage or psychiatric morbidity. This might be from the different life style and most participants were nonsmokers (96%) and non illicit drug usage (98.7%).

We also found that the frequent psychosocial

stressors were also the risks factors of postpartum MHP as the study of Nilchaikovit T, et al ⁽²⁾ (Table 3). After logistic regression analysis of all significant variables: demographic and socioeconomic and obstetric variable and also 3 frequent psychosocial stressors, were done, only 5 variables: quantity of breast milk, worrying about pregnancy and delivery, financial problem, postpartum complications and number of marriage, were disclosed. Their adjusted OR were 4.1 (95% CI 2.0, 8.5), 4.9 (95% CI 1.9, 12.4), 6.4 (95% CI 2.1, 19.6), 3.9 (95% CI 1.3, 11.5) and 2.7 (95% CI 1.1, 7.1), respectively (P<0.05) (Table 6).

We will see that almost 1/3 of postpartum women had the risk of developing postpartum MHP. So the obstetricians should also realize the importance of mental health problem. It is suggested that we should try to screen, identify or even detect mental disorders in those who trend to have psychiatric problem, e.g. inadequate breast milk, worrying about pregnancy and delivery, financial problem, postpartum complications or multiple partner person. The convenient channel should be arranged for the risk group to consult psychiatrists before discharge.

Table 1. Socio-demographic characteristics (N=260 cases).

Characteristics		Thai GHQ negative (185cases) Number (%)	Thai GHQ positive (75cases) Number (%)	P value
Mean age (yr.±S.D.)		26.4 ± 5.7	27.4 ± 5.4	0.14
Marital number	First	173 (93.5)	63 (84)	0.03*
	≥ Second	12 (6.5)	12 (16)	
Marital status	Marriage	177 (95.7)	73 (97.3)	0.73
	Separated	8 (4.3)	2 (2.7)	
	Single	0 (0)	0 (0)	
Family Income (bahts/month)	≤10,000	90 (48.6)	46 (61.3)	0.28
	10,001-20,000	77 (41.6)	23 (30.7)	
	20,001-50,000	17 (9.2)	6 (8)	
	50,000-10,0000	1 (0.5)	0 (0)	
Smoking	No	178 (96.2)	72 (96)	0.78
	Sometime	6 (3.2)	3 (4)	
	Heavy	1 (0.5)	0 (0)	
Alcohol drinking	No	152 (82.2)	53 (70.7)	0.06
	Yes	33 (17.8)	22 (29.3)	
Drug addict	No	185 (100)	74 (98.7)	0.12
	Yes	0 (0)	1 (1.3)	

Data were presented as mean ± SD, frequencies

* = P <0. 05 was defined as statistically significant

Table 2. Obstetric characteristics (N=260 cases)

Characteristics		Thai GHQ negative (185 cases) Number (%)	Thai GHQ positive (75 cases) Number (%)	P value
Pregnancy planning	Yes	140 (75.7)	49 (65.3)	0.18
	No	45 (24.3)	26 (34.7)	
Parity	Primipara	101 (54.6)	38 (50.7)	0.12
	Multipara	84 (45.4)	37 (49.3)	
Abortion	No	156 (84.3)	59 (78.7)	0.28
	Yes	29 (15.7)	16 (21.3)	
Mode of delivery	Normal labor	98 (53)	51 (68)	0.29
	Others	87 (47)	24 (32)	
Previous pregnancy	Abnormal symptom	No	135 (73)	0.75
		Yes	50 (27)	
Infant	Normal	158 (85.4)	60 (80)	0.23
	Abnormal	27 (14.6)	15 (20)	
Postpartum complications	No	183 (98.9)	72 (96)	0.10
	Yes	2 (1.1)	3 (4)	

* = P < 0.05 was defined as statistically significant

Table 2. Obstetric characteristics (cont.)

Characteristics		Thai GHQ negative (185 cases) Number (%)	Thai GHQ positive (75 cases) Number (%)	P value
Gestational age (wk) Mean \pm SD		38.6 \pm 1.6	38.3 \pm 1.7	0.24
Medical problem	No	117 (63.2)	52 (69.3)	0.26
	Yes	68 (36.8)	23 (30.7)	
Medication	No	178 (96.2)	69 (92)	0.22
	Yes	7 (3.8)	6 (8)	
Previous surgery	No	151 (81.6)	67 (89.3)	0.30
	Yes	34 (18.4)	8 (10.7)	
Abnormal symptom	No	173 (93.5)	71 (94.7)	0.38
	Yes	12 (6.5)	4 (5.3)	
Investigation	No	146 (78.9)	54 (72)	0.51
	Yes	39 (21.1)	21 (28)	
Pain control	No	114 (61.6)	37 (49.3)	0.24
	Yes	71 (38.4)	38 (50.7)	
Mode of delivery	N/L	98 (53)	51 (68)	0.29
	Operative	87 (47)	24 (32)	
Postpartum complications	No	176 (95.1)	63 (84)	0.009*
	Yes	9 (4.9)	12 (16)	
Quantity of breast milk	adequate	154 (83.2)	47 (62.7)	0.001*
	inadequate	31 (16.8)	28 (37.3)	
Worry about baby care	No	167 (90.3)	57 (76)	0.001*
	Yes	18 (9.7)	18 (24)	
Postpartum adaptation	No	70 (37.8)	14 (18.7)	0.001*
	Yes	115 (62.2)	61 (81.3)	
Bad experience for labor	No	106 (57.3)	36 (48)	0.27
	Yes	79 (42.7)	39 (52)	

* = P < 0.05 was defined as statistically significant

Table 3. Frequent psychosocial stressors (N=260 cases).

Problems or worrying	Severity	Thai GHQ negative (185 cases) Number (%)	Thai GHQ positive (75cases) Number (%)	P value
Worrying about pregnancy & delivery	Not at all	71 (38.4)	7 (9.3)	<0.001*
	a little bit	104 (56.2)	57 (76)	
	a lot	10 (5.4)	11 (14.7)	

Changes of body shape	Not at all	55 (29.7)	12 (16)	0.016*
	a little bit	81 (43.8)	35 (46.7)	
	a lot	49 (26.5)	28 (37.3)	
Little/ no sexual desire, or no pleasure	Not at all	74 (40)	28 (37.3)	0.18
	a little bit	98 (53)	35 (46.7)	
	a lot	13 (7)	12 (16)	
Difficulties with spouse, partner/lover	Not at all	100 (54.1)	28 (37.3)	0.013*
	a little bit	84 (45.4)	46 (61.3)	
	a lot	1 (0.5)	1 (1.3)	
Stress of taking care of other family members	Not at all	118 (63.8)	32 (42.7)	0.001*
	a little bit	67 (36.2)	42 (56)	
	a lot	0	1 (1.3)	
Stress at working outside	Not at all	106 (57.3)	35 (46.7)	0.04*
	a little bit	79 (42.7)	37 (49.3)	
	a lot	0	3 (4)	
Financial problem	Not at all	65 (35.1)	4 (5.3)	<0.001*
	a little bit	109 (58.9)	43 (57.3)	
	a lot	11 (5.9)	28 (37.3)	
No consultant	Not at all	99 (53.5)	31 (41.3)	0.27
	a little bit	75 (40.5)	42 (56)	
	a lot	11 (5.9)	2 (2.7)	
Bad events in life	Not at all	170 (91.9)	58 (77.3)	0.002*
	a little bit	13 (7)	15 (20)	
	a lot	2 (1.1)	2 (2.7)	
Thinking or dreaming about terrible events	Not at all	159 (85.9)	54 (72)	0.01*
	a little bit	25 (13.5)	21 (28)	
	a lot	1 (0.5)	0	

* = P < 0.05 was defined as statistically significant.

Table 4. Logistic regression for socio-demographic and obstetric data

Variables	Adjusted OR	95% CI	P-value
Worrying about baby care	3.24	1.68-6.25	0.001*
Quantity of breast milk	2.62	1.37-5.01	0.004*
Number of marriage	3.68	1.46-9.27	0.006*
Postpartum complications	3.38	1.29-8.85	0.013*

* = P < 0.05 was defined as statistically significant.

Table 5. Logistic regression for frequent psychological stressors

Variables	Adjusted OR	95% CI	P-value
Worrying about pregnancy and delivery	5.91	2.00-17.51	0.001*
Financial problem	3.57	1.49-8.56	0.004*
Bad events in life	2.23	1.01-4.90	0.04*

* = P < 0.05 was defined as statistically significant.

Table 6. Logistic regression for significant socio-demographic, obstetric data and psychological stressors

Variables	Adjusted OR	95% CI	P-value
Quantity of breast milk	4.12	1.99-8.54	<0.001*
Worrying about pregnancy & delivery	4.92	1.95-12.45	0.001*
Financial problem	6.35	2.06-19.61	0.001*
Postpartum complications	3.89	1.32-11.45	0.014*
Number of marriage	2.74	1.05-7.12	0.039*

* = P < 0.05 was defined as statistically significant.

OR = odds ratio

Conclusion

The prevalence of postpartum MHP was 28.8%. The prognostic factors of psychosocial stressors were worrying about pregnancy and delivery, financial problem and bad events in life.

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ความชุกของปัญหาสุขภาพจิตของหญิงหลังคลอดในโรงพยาบาลศิริราช

นิพนธ์ บุญยัง, วิบูลพรรณ ฐิตะดิลก, ศุภโชค สิงห์กันต์

วัตถุประสงค์ : ศึกษาหาความชุกของปัญหาสุขภาพจิตของหญิงหลังคลอด

รูปแบบการศึกษา : การศึกษาเชิงพรรณนาแบบตัดขวาง

วัสดุและวิธีการ : ทำการศึกษาในหญิงหลังคลอดที่อายุครรภ์ตั้งแต่ 24 สัปดาห์ภายใน 48 ชั่วโมงแรก รวมทั้งหมด 260 ราย ซึ่งมาคลอดที่รพ.ศิริราช ระหว่างวันที่ 8 พฤษภาคม ถึง 2 สิงหาคม 2551 โดยหลังจากลงนามในใบสมัครใจยินดีเข้าร่วมในโครงการวิจัยแล้ว จะให้ตอบแบบสอบถามซึ่งประกอบด้วย แบบคัดกรองปัญหาสุขภาพจิต-ไทยจีเอชคิว-30 และข้อมูลของปัจจัยเสี่ยงที่พบบ่อยที่อาจนำไปสู่การทำให้เกิดความเครียด

ตัวชี้วัดที่สำคัญ : ความชุกของปัญหาสุขภาพจิตของหญิงหลังคลอด

ผลการศึกษา : พบความชุกของปัญหาสุขภาพจิต 28.8% ปัจจัยที่มีความสัมพันธ์กับการเกิดปัญหาสุขภาพจิตอย่างมีนัยสำคัญทางสถิติ ($P < 0.05$) คือ ความกังวลในการเลี้ยงดูบุตร ปริมาณน้ำนม จำนวนครั้งที่แต่งงานและภาวะแทรกซ้อนหลังคลอด โดยมี adjusted OR 3.24 (95%CI 1.68, 6.25), 2.62 (95%CI 1.37, 5.01), 3.68 (95%CI 1.46, 9.27), 3.38 (95%CI 1.29, 8.85) ตามลำดับ ตัวพยากรณ์ถึงการเกิดปัญหาสุขภาพจิตที่มีนัยสำคัญทางสถิติ ($P < 0.05$) คือ ความกังวลเกี่ยวกับการตั้งครรภ์และการคลอด, ปัญหาด้านการเงิน และประสบการณ์ด้านลบในอดีต โดยมี adjusted OR 5.91 (95%CI 2.00, 17.51), 3.57 (95%CI 1.49, 8.56), 2.23 (95%CI 1.01, 4.90) ตามลำดับ.

สรุป : ความชุกของปัญหาสุขภาพจิตของหญิงหลังคลอดเท่ากับ 28.8% และตัวพยากรณ์ถึงการเกิดปัญหาสุขภาพจิตคือ ความกังวลเกี่ยวกับการตั้งครรภ์และการคลอด ปัญหาด้านการเงิน และประสบการณ์ด้านลบในอดีต
