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Relationships between maternal socio-demographics, self-efficacy Social support and depression in thai adult mothers with children under one year old

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ABSTRACT

The prevalence of maternal depression has become an important problem worldwide including Thailand. The purpose of this cross sectional study was to investigate the association of maternal self-efficacy and social support with maternal depression. The sample comprised 285 mothers with children aged one year or less and who attended the well-baby clinic in the pediatric out patient department at Samutsakhon Provincial Hospital. Data was collected using self-administrated questionnaires and the self-report technique. Pearson's Correlation Coefficient, Chi-square test and multiple regression analysis using Stepwise procedure were used for data analysis.

Results revealed that the factors that were significantly related to maternal depression, were education level (r = .123, p =.038), sufficient family income (χ^2 =9.877, p=.007), maternal self-efficacy (r = -.135, p =.028), and social support (r = -.171, p =.004). After applying stepwise multiple regression analysis by controlling education level and sufficient family income, social support was found to be a good predictor (R^2 = 9.5, p= .046) of depression, while self-efficacy (R^2 = 9.5, p= .051) was not.

This study has shown that self-efficacy and social support are inversely related to maternal depression. It emphasizes the need for further study identifies and explains the role of maternal self-efficacy as a mediator in reducing maternal depression.

Keyword Maternal self-efficacy social support maternal pression

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ความสัมพันธ์ระหว่างการรับรู้ความสามารถของแม่ในการดูแลลูก แรงสนับสนุนทางสังคมกับภาวะซึมเศร้าในแม่ที่มีบุตรวัยแรกเกิดถึงหนึ่งปี

ชุติมา นิติสิงห์ นภาพร โสวัฒนางกูร ศิริกุล อิศรานุรักษ์

บทคัดย่อ

ความชุกของภาวะซึมเศร้าในแม่เป็นปัญหาสำคัญในเกือบทุกประเทศทั่วโลก และรวมถึงประเทศไทยด้วย วัตถุประสงค์ของการศึกษาแบบตัดขวางนี้เพื่อที่สืบหาความสัมพันธ์ของการรับรู้ความสามารถของแม่ในการดูแลลูก แรงสนับสนุนทางสังคมกับภาวะซึมเศร้าในแม่ ซึ่งกลุ่มตัวอย่างคือ แม่ที่มีอายุตั้งแต่ 20 ปีขึ้นไป ที่มีบุตรวัยแรกเกิดถึงหนึ่งปี ที่มารับบริการที่คลินิกเด็กสุขภาพดีเพื่อฉีดวัคซีน ที่ตึกผู้ป่วยนอก โรงพยาบาลสมุทรสาคร เป็นจำนวน 285 ท่าน โดยการตอบแบบสอบถาม และการวิเคราะห์ข้อมูลใช้สัมประสิทธิ์สหสัมพันธ์เพียร์สัน วิธีทดสอบ Chi-square และการวิเคราะห์ความถดถอยเชิงพหุ โดยใช้วิธี Stepwise

ผลการศึกษาพบว่า ปัจจัยที่มีความสัมพันธ์อย่างมีนัยสำคัญกับภาวะซึมเศร้า ได้แก่ ระดับการศึกษา ($r = .123, p = .038$), ความพอเพียงของรายได้ของครอบครัว ($\chi^2 = 9.877, p = .007$), การรับรู้ความสามารถของแม่ในการดูแลลูก ($r = -.135, p = .028$), แรงสนับสนุนทางสังคม ($r = -.171, p = .004$) หลังจาก ใช้การวิเคราะห์ความถดถอยเชิงพหุ โดยใช้วิธี Stepwise รวมถึงได้ควบคุมระดับการศึกษาและความพอเพียงของรายได้ของครอบครัว พบว่าแรงสนับสนุนทางสังคมเป็นตัวที่สามารถทำนายภาวะซึมเศร้าของแม่ ($R^2 = 9.5, p = .046$) ส่วนการรับรู้ความสามารถของตนเองไม่ใช่ตัวที่สามารถทำนายภาวะซึมเศร้า ($R^2 = 9.5, p = .051$)

ผลการศึกษาแสดงถึงว่า การรับรู้ความสามารถของตนเอง และ แรงสนับสนุนทางสังคม มีความสัมพันธ์แบบตรงข้ามกับภาวะซึมเศร้าของแม่ สิ่งที่ควรเน้นในการศึกษาครั้งต่อไปคือ การค้นหาว่า การรับรู้ความสามารถของแม่มีบทบาทเป็นเหมือน Mediator ที่จะช่วยลดภาวะซึมเศร้าของแม่หลังคลอด

คำสำคัญ ภาวะซึมเศร้า การรับรู้ความสามารถของแม่ในการดูแลลูก แรงสนับสนุนทางสังคม

INTRODUCTION

Depression is a serious and manageable mental disorder affecting about 121 million people worldwide in a given year (1). Because of hormonal fluctuations and changes in life roles, women during pregnancy and the postpartum period are at a high risk of depression. Previous research has shown that 10 to 15 percent of maternal depression in the first year postpartum had experienced a serious episode of depressive symptoms, and that 50 percent of mothers during the first five years after childbirth reported high depression (2).

Postpartum depression has negative consequences on the child, the mother, and the family. More importantly, untreated postpartum depression affects child development and well-beings (3-5). A study by Teti et al. (1991) found that depressed mothers were less attached to their babies, less affectionate and less sensitive to their babies' needs (6). In an extreme case in the Teti study, a depressed mother was so inattentive that she did not notice that the baby had fallen off her lap. In addition, research has shown that children of depressed mothers are vulnerable to increased psychopathology (7-13).

Literature suggests that perceived social support (perception of satisfaction with support) and maternal self-efficacy (confidence in performance as a mother) are modifiable factors associated with postpartum depression. Lack of social support was associated with postpartum depression (14-17). Two studies examining the relationship between self-efficacy and depression have found that patients who reported high self-efficacy scores exhibited fewer symptoms of depression than those with low scores (18, 19). However, there has been limited research about the simultaneous association of perceived social support and self-efficacy with postpartum depression. Research in Thailand has also focused more on maternal self-efficacy with ill or disabled children. Therefore, the objective of this study was to examine the association of maternal characteristics (e.g. age, education, family income) and modifiable factors (social support and self-efficacy) with depression in mothers attending the well-baby clinic during the first year after childbirth. It was hypothesized that both of the modifiable factors would be negatively associated with depression when controlling for the sociodemographic status.

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METHODOLOGY

This study was approved by the Ethics' Committee of Mahidol University (ที่ศธ 0517.016(1)/790) and Samutsakhon Hospital (ที่ สค 0027.2/ พิเศษ). Using a standardized questionnaire, and self-report technique, a cross-sectional survey was conducted. The questionnaires consisted of maternal socio-demographics status; Self-Efficacy in Infant Care Scale (20); Personal Resource Questionnaire Part II in Thai version (21); Health- Related Self-Report (22). It is noted that only one dimension (General Health Care) of Self-Efficacy in Infant Care Scale was used in this study. Data was collected at the Samutsakhon Provincial Hospital and a simple random sampling technique was used by selecting participant's names from the list of babies' appointments for vaccination. Eligible participants included mothers over 20 years of age with a baby under one year old, and who were Thai and able to read Thai. 295 participants were approached; however, 285 participants completed the questionnaire.

Data was analyzed using Minitab software. Univariate, bivariate and multiple regression analyses using stepwise procedure were performed.

RESULTS

Descriptive analyses of Socio-demographic characteristics

The participants ranged from 20 to 46 years old with an average age of 27.8 years (SD= 5.674). Most were in middle reproductive age from 20 to 29 years old. Most of the participants were married (90.88%) and 44.21% were housewives (unemployed). The percentage of participants with a high level of education was small. Over half had had at least a high school level of education (7-12 grades). Participants' family incomes were categorized into 3 groups based on the degree of satisfaction with their present family financial situation. More than half of the participants had enough money for saving. The majority of participants (75.09%) had planned for their children, and 80% of them had children according to their gender expectation (See Table 1).

Table 1 Socio-demographic characteristics of mothers.

Socio-demographic factors	Frequency (n = 285)	Percentage (%)
Age (years)		
20-29	179	62.81
30-39	94	32.98
40-49	12	4.21
Marital Status		
Single	14	4.91
Married	259	90.88
Separated	10	3.51
Divorced	2	0.70
Widowed	-	-
Education		
Grade 1-6	87	30.53
Grade 7-9 (junior)	68	23.86
Grade 10-12 (senior)	61	21.40
Grade 13-20 (Diploma and above)	69	24.21
Occupation		
Housewife / Unemployed	126	44.21
Government officer	30	10.53
Office worker	81	28.42
Laborer and wager	33	11.58
Seller or self-employed	15	5.26
Sufficient family income		
Income exceeds expenses and allows savings	167	58.60
Income equals expenses	102	35.79
Expenses exceed income and causes debt	16	5.61
Planned pregnancy		
Yes	214	74.83
No	72	25.17
Gender expectation		
Yes	227	79.37
No	59	20.63

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Descriptive analyses of self-efficacy, social support and depression

Means, standard deviations, and ranges of the key variables are presented in Table 2.

Table 2 Scale used, means, standard deviations, and ranges of maternal self-efficacy, social support and maternal depression.

Variables	Scale used	Mean	SD	Actual Range	Possible Range
Self-efficacy	SICS (General health care subscale)	74.53	15.67	24.6 - 100	0 - 100
Social support	PRQ	129.92	14.54	74 - 170	25 - 175
Depression	HRSR	8.12	6.62	5 - 52	0 - 60

Note. SICS=Self-efficacy in Infant care scale (20); PRQ= Personal Resource Questionnaire (Part II) (22); HRSR= Health-Related Self-Report (23)

Bivariate analyses between socio-demographic characteristics, self-efficacy, social support, and depression

Pearson's correlation coefficient as seen in Table 3, shows that higher educated mothers related to higher levels of depression (r =.123, p<.05); mothers with high self-efficacy had low levels of depression (r= -.135, p<.05); and mothers reporting high social support had low levels of depression (r=-.171, p<.01).

Table 3 Pearson's correlation between age, education level, maternal self-efficacy, social support, and maternal depression.

Variables	Maternal age (r)	Education level (r)	Self-efficacy (r)	Social support (r)	Depression (r)
Maternal age	1.000				
Education level	-0.119*	1.000			
Self-efficacy	0.093	0.144*	1.000		
Social support	0.030	0.035	0.393**	1.000	
Depression	-0.100	0.123*	-0.135*	-0.171**	1.000

*p<.05, **p<.01

Evidence from Chi-square indicate that family income and depression are dependent at significant level <.01. Results from chi-square tests for other categorical variables are illustrated in Table 4.

Table 4 Chi-square tests marital status, occupation, sufficient family income, planned pregnancy, and gender expectation and maternal depression.

Variables	x^2	p-value
Marital status	.196	.658
Occupation	.156	.695
Sufficient family income	9.877	.007*
Planned pregnancy	2.763	.096
Gender expectation	1.402	.236

*p<.01

Multiple regression analysis predicting depression (n= 285)

Multiple regression analysis was used to examine the predictors of depression. All significant variables from bivariate analyses were included in the multiple regression analysis. Self-efficacy was no longer a significant predictor of depression. The results also showed that education level, sufficient family income, and social support remained significant predictors of depression (Table 5). When controlling other factors in the model, the results indicated that the higher the score of social support, the lower score of depression.

Table 5 Multiple regression analysis between education level, sufficient family income, self-efficacy, social support and maternal depression.

Factors	b	t	p-value
Education (years)	0.3868	3.58	0.001**
Sufficient family income (yes)	2.3645	3.52	0.001**
Self-efficacy (score)	0.0038	- 1.96	0.051
Social support (score)	-0.056	- 2.00	0.046*
$R^2 = 9.5$	$R^2_{adj} = 8.2$	S.E = 6.349	n= 285

p<.01**, p<.05*

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DISCUSSION

Of the socio-demographic characteristics examined in this study, maternal education level and family income were related to maternal depression. Unexpectedly, low education level was related to low maternal depression. The significant finding of this study was probably due to mothers with high education worrying about their lives and their babies. To support this argument, education is the basic foundation for thought process and decision-making. Education makes mothers aware of the importance and benefits of knowledge-seeking for childcare, and makes them more skillful in utilizing useful resources (23). However, two meta-analyses of over 10,000 subjects have found that level of education was not associated with maternal depression (24, 25).

No significant relationship between age and depression was found in this study. This result is consistent with the studies conducted by O'Hara (24) and Beck (25). Although it has been documented that adolescent mothers contribute a high risk population for depression (3, 15, 16, 26), this study focused mothers who were 20 years old and above. Age is one of the factors indicating one's maturity in many dimensions. It means that adult mothers are more mature and ready to provide infant care physically, emotionally, socially, and intellectually. They have more life experience than teenage mothers which may reduce the level of depression.

The majority of participants were married and reported low depression scores (mean = 18 ranging from 5 to 52). Bivariate analysis however indicated that marital status had no significant relationship with depression. This may be because the women in this study were satisfied with support from their spouses. They therefore had low levels of depression. Supporting this argument, a supportive relationship with a father of the child can help mitigate the stresses of being a new mother. Marital status is also reported as a factor contributing to the development of maternal depression (27).

Several studies have shown that a mother's occupation can be a risk factor for postpartum depression (24, 25). In this study, the majority of mothers were housewives or unemployed. Contrary to the results of previous studies, occupation had no relationship with depression.

As hypothesized, high maternal self-efficacy and high social support were found to be correlated with low maternal depression. These results are

consistent with previous research conducted in Thailand (21), and suggest that the women in this study had adequate and good quality social support from their social networks. Perceived social support may increase women's perception of their confidence to perform as mothers. However, further analysis using the stepwise multiple regression procedure indicated that only social support was a predictor of maternal depression. This may be because self-confidence in performing general health care for children may be eliminated by the perception of social support.

The results of this study must be interpreted in the light of several limitations. The cross-sectional design of the study did not allow the determination of causal effects. The use of self-report questionnaire is a well-known source of potential bias. The way in which the gender expectation question was drafted could have invited a "Yes" response. The question about gender expectation allowed only 2 choices: "Yes" (gender met mother's expectation) or "No" (gender did not meet mother's expectation). This may not have allowed the mothers to give sufficient information because many mothers said that they did not expect a particular gender. Thus, they answered "Yes" even though the baby was not according to expectation. This might have made "Yes" answer higher than it should have been. It is suggested that further study should provide more choices for gender expectation question. A third alternative to this question could be "feeling happy with either gender."

The bivariate analysis found that self-efficacy related to maternal depression. However multiple regression analysis using Stepwise found no significant relationship between self-efficacy and depression. This may be because only one dimension (General Health Care) of the Self-Efficacy in Infant Care Scale was used. All dimension of the scale should be used to measure the confidence in performing as a mother.

The Health-Related Self-Report (HRSR) questionnaire is the screening test for the major depression. That means the mothers who scored higher than 25 were considered to be depressed. Depression in these mothers may be due to either postpartum depression or major depression.

The strength of this study is that standardized questionnaires were constructed for Thai people. Even though the part of social support measurement

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using PRQ-85 was not developed by Thai experts, it has been used by Thai people and tested for validity and reliability. The response rate to the completed questionnaire was also high (96.61%).

RECOMMENDATIONS

It is recommended that well-baby clinics should provide an education program such as "Child Care" or "Activities Practice" for mothers after childbirth to increase their confidence in taking care of their children. In turn, this will reduce opportunities to develop depression. Furthermore, mental health consultants should be trained in order to assist depressed mothers. The results of this study also imply that interventions aiming to increase social support are urgently needed because adequate and good quality of social support is a significant predictor of depression. Additionally, to achieve the aim of reducing the risk of depression, husbands or other main carers should be invited to join intervention programs to help mothers performing child care. More specifically, husband should be educated about the physical and mental health of mothers after childbirth because there is a high risk of developing depression during this time. All possible effort should be made to prevent the risk of depression.

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