



Associated with Postpartum Depression among Women Who Conceived with Infertility Treatment



Chuan-Chen Li¹, Li-Yin Chien^{2,3}

¹ Department of Nursing, Cardinal Tien Junior College of Healthcare and Management, New Taipei City 23143, Taiwan

² Institute of Public Health, National Yang-Ming University, Taipei, Taiwan

³ Institute of Community Health Care, National Yang-Ming University, Taipei, Taiwan

Introduction

Around 15% of all couples of childbearing age in Taiwan have infertility. About 7~20% of women have depressive symptoms during infertility treatment, and the psychological pressure might remain high when they become mothers. Postpartum mood disorder of mothers will lower the ability of taking care of themselves and the baby, thus affect the health of the mother and the baby. Most of previous researches on infertile women focused on psychosocial problems during infertility treatment, few focused on examining the effect of different infertility treatments on postpartum depression.

Objective

The study aimed to describe the prevalence of postpartum depression within 6 months of childbirth in women conceived with infertility treatment, and examine the effect of socio-demographic, history of depression, pregnancy history, healthy history, breastfeeding, perceived pressure, social support, history of infertility, and infertility treatments on postpartum depression.

Methods

This study was a cross-sectional survey performed from November 2014 through May 2015. The study participants were 180 women who conceived with infertility treatment and were within 6 months postpartum at a medical center in Taipei, Taiwan. Data were collected by telephone interviews and chart review using a structured questionnaire. The study variables included socio-demographics, personal and family history of depression, women and infant health history, breastfeeding, pressure change, social support, history of infertility, and infertility treatment. The dependent variable is postpartum depression within 6 months after delivery as measured by the Edinburgh Postnatal Depression Scale with a cutoff score of 10.

Results

The prevalence of postpartum depression within 6 months after delivery is estimated at 34.4% among the study women. The binary logistic regression revealed that breastfeeding (OR=0.347, 95% CI=0.123~0.980), social support (OR=0.901, 95% CI=0.853~0.952), and baby gender in line with expectations (OR=0.177, 95% CI=0.060~0.523) were negatively

associated with postpartum depression. Perceived postpartum pressure higher than before infertility treatment (OR=4.403, 95% CI=1.512~12.822), duration since infertility diagnosis longer than 3 years (OR=5.158, 95% CI=1.825~14.577), maternal age older than 35 years old (OR=8.313, 95% CI=2.642~26.155), pregnancy via IVF (OR=5.738, 95% CI=1.420~23.189), and experiencing three or more different courses of infertility treatment (OR=8.671, 95% CI=2.382~31.567) were associated with a higher risk for postpartum depression. The model yielded acceptable fit (model $X^2 = 126.934$, $df = 9$, $p < 0.001$; Hosmer and Lemeshow Test Goodness-of-fit test: $X^2 = 7.079$, $df = 8$, $p = 0.528$) and good explanatory power (Cox & Snell $R^2 = 0.506$; Nagelkerke $R^2 = 0.699$).

Table. Multi-variable logistic regression model for postpartum depression among women conceived with infertility treatment within 6 months of childbirth (N=180)

Variables	Postpartum depression				
	β	S.E.	OR	95% CI	p-value
Breastfeeding					
No			1		
Yes	-1.059	0.530	0.347	0.123~0.980	0.046*
Perceived postpartum pressure being higher than before infertility treatment					
No			1		
Yes	1.482	0.545	4.403	1.512~12.822	0.007**
Social support	-0.104	0.028	0.901	0.853~0.952	< 0.001***
Duration since infertility diagnosis					
≤ 3 years			1		
> 3 years	1.641	0.530	5.158	1.825~14.577	0.002**
Baby gender in line with expectations					
No			1		
Yes	-1.734	0.554	0.177	0.060~0.523	0.002**
Maternal age					
Non-Advanced maternal age (< 35)			1		
Advanced maternal age (≥ 35)	2.118	0.585	8.313	2.642~26.155	< 0.001***
Pregnancy via IVF					
No			1		
Yes	1.747	0.713	5.738	1.420~23.189	0.014*
Experiencing three or more courses of infertility treatment					
No			1		
Yes	2.160	0.659	8.671	2.382~31.567	0.001**
Months after delivery	-0.235	0.222	0.791	0.512~1.222	0.291

* $p < .05$, ** $p < .01$, *** $p < .001$

Conclusion

Women who conceived with infertility treatment in Taiwan had a high prevalence of postpartum depression. Longer duration since infertility diagnosis, older maternal age, conception via invasive treatment, and multiple courses of infertility treatment were associated with an increased risk for postpartum depression. Policies regarding infertility treatment should incorporate mental health counseling and prevention of postpartum depression. Health care professionals should enhance pregnancy- and labor-related health education for women who conceived through infertility treatment and offer them more support and help after delivery.