



산욕초기 산모의 모성역할 수행 자신감 영향요인

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Factors Influencing Self-confidence in the Maternal Role among Early Postpartum Mothers

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Purpose: The purpose of this study was to identify the influencing factors of mothers' confidence in their maternal role during the early postpartum period. **Methods:** Participants were 178 postpartum women who delivered at three specialized obstetrics and gynecology facilities and used the postpartum care facility in city B. Data were collected from February to April, 2012 using the scales of measurements of self-confidence in maternal role performance, maternal self-esteem, mother-to-infant attachment, social support, and childcare stress. Descriptive statistics, Pearson correlation coefficients, and stepwise multiple regression were used with the SPSS/WIN 18.0 program to analyze the data. **Results:** The scores for self-confidence in the maternal role showed significant negative correlations with the scores of childcare stress ($r = -.40, p < .001$). Parity and maternal attachment were significant predictors and accounted for 97.4% of the variance in self-confidence in the maternal role. **Conclusion:** To strengthen self-confidence in the maternal role of early postpartum mothers, prenatal class programs need to be complemented in order to reduce childcare stress and promote mother-to-infant attachment.

Key Words: Mothers, Postpartum period, Role

INTRODUCTION

The trend towards nuclear families due to the rapid economic development and social change made it difficult to expect surrogate parenting from grandparents by reducing the support of the family and increasing the parents' responsibility for child-rearing. The decreasing number of household members caused by the trend towards nuclear families has reduced the burden of housewives on housekeeping services and so on. However, it also increased burden on the maternal role because

83.1% of infants younger than 1 year are mainly brought up by mothers (Kim, Kim, Jo, Kim, & Lim, 2009).

The maternal role means to establish the maternal identity and to perform acts based on the needs of a baby (Mercer, 2004) and by accepting a new family member after childbirth, interaction among family members occurs and the maternal role begins while recognizing each role (White, Wilson, Elander, & Persson, 1999) and is strengthened as a child grows throughout his/her life-cycle (Mercer). The maternal role of a mother is important because it has a decisive effect on the lifetime of

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a child, it develops and maintains the ideal mother-to-infant relationship and forms the foundation of normal growth and development of a child (Chae, 2005).

However, a woman experiences major changes physically and mentally along with the transition of the maternal role in the development process called childbirth. These changes give joy and fulfillment to a woman but also give burden and the responsibility of having to re-adjust activities and roles at the same time (Cho & Yang, 2001). Therefore, the stressful situation due to the burden of having to adapt herself to a new role of being a mother can cause negative results such as lack of caring for the baby and inappropriate mother-to-infant interaction (Assel et al., 2002). In addition, a mother having difficulty in the transition of the maternal role may cause growth retardation, behavioral problems and cognitive developmental disabilities in a child (Belsky & Fearon, 2004).

In case of the transition of a successful maternal role, a mother's psychological state appearing from the end of pregnancy to early delivery becomes an important clue and self-confidence in the maternal role means that this transition was made successfully (White et al., 1999). If a woman feels that she can take good care of a baby, self-esteem increases and interaction with the baby becomes positive and she shows an affectionate reaction to her baby. On the other hand, if self-confidence of caring for a baby decreases, there is difficulty in performing the maternal role (Lee & Kwon, 2006)

Most previous studies on self-confidence in the maternal role were conducted targeting the mothers of children with health problem such as babies with health problems (mental diseases, premature babies and so on) (Kwon & Kwon, 2007) and there are only a few studies whose subject is pregnant women. The subject is defined by the comprehensive women; 4 weeks after childbirth, 8 weeks after childbirth and 5-7 months after childbirth. So, it is difficult to explain self-confidence in maternal role performance in the early puerperium. Also, childcare stress, social support (Emmanuel, Creedy, St John, & Brown, 2011), maternal self-esteem, mother's health status (Emmanuel et al.,), mother-to-infant attachment (White et al., 1999) and whether the pregnancy was planned or not (Lowdermilk & Perry, 2007) are explained for the factors which have effect on maternal role performance, but those related variables are considered at the same time. So, there is no study explaining the factors contributing to self-confidence in maternal role performance the early postpartum stage.

Therefore, this study should consider that the number

of mothers who spend important periods of puerperium in postpartum care facilities rather than at home has increased because of the nuclearization. It should also examine self-confidence in maternal role performance for women who gave birth to healthy newborn babies and are using postpartum care facilities so as to exclude the babies' health status causing the difference of maternal role performance, an exogeneous variable, and grasp the effective factors.

The purpose of this study is to identify the factors affecting self-confidence in the maternal role targeting early postpartum mothers. The specific purposes are as follows.

- To identify general characteristics, self-confidence in the maternal role, maternal self-esteem, mother-to-infant attachment, social support and childcare stress
- To identify self-confidence in the maternal role depending on the general characteristics
- To identify the interrelation of self-confidence in the maternal role, maternal self-esteem, mother-to-infant attachment, social support and childcare stress
- To identify the influencing factors of self-confidence in the maternal role

METHODS

1. Study Design

This study is a descriptive research to understand self-confidence in the maternal role, maternal self-esteem, mother-to-infant attachment, social support and childcare stress of early postpartum mothers as well as to identify the influencing factors of self-confidence in the maternal role.

2. Sample and Setting

This study set the mothers, who participated in the breast-feeding training class or visited a breast-feeding room, among the mothers using a postpartum care facility after giving birth at the three specialized obstetric and gynecology hospitals located in B city. The subjects were randomly selected from the mothers who met the following criteria: Mothers who understood the purpose of this study and who agreed to be participants. The specific criteria for selecting study subjects included mothers within 3 weeks after childbirth using the postpartum care facility after giving birth with a gestational

period of over 37 weeks, and who had a neonate who weighed more than 2,500mg at birth without congenital anomaly.

As the number of subjects needed for this study, 138 people were presented while setting five independent variables used in the regression analysis, power of test, .95, significance level .05, effect size of mid-level .15, by using G*Power 3.1.2 program. Thus, this study was conducted targeting 180 people by considering a 30.0% failure rate.

3. Instrument

1) General characteristics

The general characteristics of subjects included demographic characteristics (age, level of education, whether they are employed or not, monthly income of total household members) and obstetric characteristics (childbirth experience, type of childbirth, gestational period of the newborn, sex of the newborn, whether the pregnancy was planned or not, presence of prenatal education, whether there is a person who will help after leaving postpartum care facility).

2) Self-confidence in the maternal role

Self-confidence in the maternal role was measured using the 5 dimension measuring mother's confidence in her ability to cope with the tasks of motherhood of the postpartum self-evaluation scale including a total of 87 questions of 8 dimensions developed by Lederman, Weingarten and Lederman (1981) and translated into Korean by Lee (1992). This tool was designed to measure the anxiety or doubt on the ability to meet the needs of an infant and the ability to interpret the behaviors of an infant and the parental role of a mother. This inventory consists of 14 questions rated on a 4-point scale with higher scores indicating higher self-confidence in the maternal role. When developed, the reliability of the tool was Cronbach's $\alpha = .62\sim .82$ in each area and Cronbach's $\alpha = .94$ in the study of Lee and Cronbach's $\alpha = .77$ in this study

3) Maternal self-esteem

This study used the maternal self-esteem tool that Han and Bang (1999) adapted · modified and the maternal self-report inventory developed by Shea and Tronick (1988) targeting Korean women. It consists of a total of 25 questions rated on a 5-point Likert scale and a high score means high maternal self-esteem. When developed, the reliability of the tool was Cronbach's $\alpha = .83$

in each area and Cronbach's $\alpha = .83$ in the study of Han and Bang and Cronbach's $\alpha = .79$ in this study.

4) Mother-to-infant attachment

Mother-to-infant attachment means the degree of attachment to an infant that a mother evaluates herself and the tool that Han (2001) adapted and modified · supplemented by the maternal attachment inventory devised by Muller (1994). It consists of a total of 26 questions rated on a 4-point scale and a high score means a high mother-to-infant attachment. When developed, the reliability of the tool was Cronbach's $\alpha = .85$ and Cronbach's $\alpha = .89$ in the study of Han and Cronbach's $\alpha = .96$ in this study.

5) Social support

For social support of postpartum women, the social support scale modified by Song (1992) based on an indirectly perceived social support scale developed by Park (1985) was used. This tool consists of a total of 25 questions of 4 sub factors, emotional, informational, evaluative, material support and is a 5-point Likert scale with higher scores indicating higher social support. When developed, the reliability of the tool was Cronbach's $\alpha = .93$ and Cronbach's $\alpha = .97$ in the study of Song and Cronbach's $\alpha = .98$ in this study.

6) Childcare stress

Childcare stress was measured using the childcare stress inventory (CSI) developed by Cutrona (1984) and translated to Korean by Chun (1998). The CSI consists of 16-items rated on a 5-point Likert scale (1 to 5) with higher scores indicating a higher degree of childcare stress as perceived by the mother. The internal consistency reliability (Cronbach's $\alpha = .87$) and content validity were established for use in Korean postpartum women (Kwon, 1997). In this study, the Cronbach's $\alpha = .79$.

4. Data collection Procedure

After IRB approval (E-2011051), this study was conducted from February 2012 to April 2012 after explaining the study objectives and methods to the directors of 3 specialized obstetrics and gynecology hospitals located in city B and after obtaining permission.

After checking to see if the mothers were appropriate for the criteria of selecting subjects, the researcher and research assistants explained that mothers who do not want to answer according to the purpose and proce-

dures of this study can be withdrawn at any time and the collected data would be processed anonymously and the survey information will not be used for purposes other than for research. Then if agreed to participate voluntarily, they had mothers write a written agreement and read and fill out a structured questionnaire, and then collected data and presented a thank-you gift to the respondents. The research assistants were 2 sophomores in the department of nursing and pre-training on the criteria of selecting subjects, ethical considerations of research, research purpose, contents of questionnaire, research methods were carried out and the researcher checked them through evaluation. Of the distributed 180 copies, a total of 174 copies excluding 6 questionnaires containing insincere responses and missing answers were finally analyzed.

5. Data analyses

The collected data was analyzed using the SPSS/WIN 18.0 program. For general characteristics and self-confidence in the maternal role, maternal self-esteem, mother-to-infant attachment, social support and childcare stress of subjects, frequency and percentages, mean and standard deviation were calculated. The difference of self-confidence in the maternal role depending on general characteristics of subjects was analyzed with a t-test. The correlations between self-confidence in the maternal role, maternal self-esteem, mother-to-infant attachment, social support and childcare stress of subjects were found by Pearson's correlation. To determine the influencing factors of self-confidence in the maternal role of subjects, stepwise multiple regression was conducted.

RESULTS

1. General characteristics and self-confidence in the maternal role

In case of general characteristics of subjects, demographic characteristics and obstetrical characteristics were investigated. Looking at the demographic characteristics, the ages of subjects were between 24~40 years old and the mean age was 30.6 years old. In case of the level of education, 82.2% were college graduates or higher and 63.7% were full-time housewives and the monthly income of 55.7% was 3 million won or higher which was the case for most. In case of obstetric characteristics, 51.1% were primipara and the gestational age of the baby at birth was an average of 39.2 weeks and

87.4% gave birth through vaginal delivery. In case of neonatal sex, 65.5% had boys and 54.6% planned their pregnancy. For whether or not there was a person who could help other than their husband after leaving the postpartum care facility, 62.6% answered 'yes' and for whether they would participate in prenatal class or not, 75.9% answered 'yes' (Table 1).

The difference of self-confidence in the maternal role depending on general characteristics is as shown in Table 1. Women in their 30s or older showed higher self-confidence in the maternal role than those in their 20s ($t=-7.24$, $p<.001$) and women earning more than a monthly income of 3 million won showed a higher self-confidence in the maternal role than those earning less than that ($t=-3.27$, $p<.001$). And self-confidence in the maternal role of multipara was higher than that of primipara ($t=-47.86$, $p<.001$). Also, self-confidence in the maternal role of women who received prenatal education ($t=-4.24$, $p<.001$) and did not have anyone giving help ($t=2.75$, $p=.007$) was higher.

2. Self-confidence in the maternal role and independent variables

The average score of self-confidence in the maternal role which is a dependent variable of this study was 36.77 ± 4.28 , maternal self-esteem was 86.94 ± 8.10 , mother-to-infant attachment was 81.95 ± 12.89 , social support was 91.44 ± 15.09 and childcare stress was 52.79 ± 6.62 (Table 2).

3. Correlations among the study variables

The correlation between self-confidence in the maternal role and relevant factors was identified and as a result, it turned out to be a negative correlation with childcare stress ($r=-.40$, $p<.001$) (Table 3).

4. Influencing factors on the self-confidence in the maternal role

An analysis to verify factors that will influence the self-confidence of mothers in playing the maternal role in the initial stages after the childbirth was conducted by stepwise multiple regression with maternal age, income, parity, prenatal education supporter, self-confidence in the maternal role, maternal self-esteem, mother-to-infant attachment, social support and childcare stress designated as independent variables. The results of the analysis are presented in Table 4. Prior to analyzing the

Table 1. General Characteristics and Differences in Self-confidence in the Maternal Role

(N=174)

Characteristics	Categories	n (%)	M±SD	t	p
Maternal age (year)	24~29	67 (38.5)	34.24±3.38	-7.24	< .001
	30~40	107 (61.5)	38.36±4.03		
Educational level	≤ High school	31 (17.8)	36.61±4.32	-0.23	.823
	≥ College	143 (82.2)	36.80±4.29		
Occupation	Yes	111 (63.7)	37.00±4.39	0.94	.349
	No	63 (36.3)	36.37±4.10		
Income (10,000 won/month)	< 300	77 (44.3)	35.61±4.32	-3.27	< .001
	≥ 300	97 (55.7)	37.69±4.05		
Parity	Primi	89 (51.1)	32.74±1.34	-47.86	< .001
	Multi	85 (48.9)	40.99±0.88		
Type of delivery	NSVD	152 (87.4)	36.72±4.32	-0.43	.669
	C-section	22 (12.6)	37.14±4.09		
Gender of baby	Male	114 (65.5)	36.94±4.32	0.71	.476
	Female	60 (34.5)	36.45±4.24		
Pregnancy intention	Non-planned	79 (45.4)	36.29±4.27	1.35	.180
	Planned	95 (54.6)	37.17±4.28		
Prenatal education	Yes	132 (75.9)	38.95±3.68	-4.24	< .001
	No	42 (24.1)	36.08±4.24		
Supporter	Yes	109 (62.6)	36.09±4.16	2.75	.007
	No	65 (37.4)	37.91±4.27		

NSVD=normal spontaneous vaginal delivery; C-section=cesarean section.

Table 2. Mean Scores of Variables

(N=174)

Variables	M±SD
Self-confidence in the maternal role	36.77±4.28
Maternal self-esteem	86.94±8.10
Mother-to-infant attachment	81.95±12.89
Social support	91.44±15.09
Childcare stress	52.79±6.62

influencing factor, the result of verifying Multicollinearity between variables included in the analysis showed that the relationship between concepts that showed the highest correlation between independent variables is 0.47, less than 0.80 and the range of tolerance is 0.95, more than 0.10. The variation inflation factor (VIF) is 1.06 not exceeding the standard 10. Thus it turned out that Multicollinearity of data had no problems. Also, to test the independence of residuals, the Durbin-Watson test was carried out and the result was 1.86, close to 2 and independence between the error terms was satisfied. Therefore, this material turned out to be appropriate for regression analysis. Through multi-

ple regression analysis, the influencing factor on self-confidence in the maternal role of subjects was checked. As a result, prediction explanation of parity and mother-to-infant attachment was 97.4%($R^2=.974$). That is, the stronger the mother-to-infant attachment of the multipara, the higher the self-confidence in the maternal role. The regression model used in this study was significant ($F=3,248.95$, $p<.001$).

DISCUSSION

Targeting mothers experiencing the transition process of the maternal role in the early postpartum period, this study confirmed the influencing factors of self-confidence in the maternal role based on general characteristics and self-confidence in the maternal role, maternal self-esteem, mother-to-infant attachment, social support and childcare stress. The average age of all subjects was 30.6 years old and depending on the delivery experience, primipara accounted for 51.1% and multipara 48.9%. These characteristics were similar to the average childbirth age of 31 years-old, and the ratio of primipara 51.7%, multipara 48.3% depending on the delivery experience of the total population of Korea in 2009

Table 3. Correlations among Variables

(N=174)

Variables	Maternal self-esteem	Mother-to-infant attachment	Social support	Childcare stress
	r (p)	r (p)	r (p)	r (p)
Maternal self-esteem				
Mother-to-infant attachment	-.13 (.098)			
Social support	-.07 (.396)	.06 (.439)		
Childcare stress	.11 (.141)	.10 (.197)	.01 (.921)	
Self-confidence in the maternal role	.10 (.191)	-.02 (.819)	-.01 (.885)	-.40 (< .001)

Table 4. Factors Influencing Self-confidence in the Maternal Role

(N=174)

Variables	B	SE	β	t	p	Collinearity statistics	
						Tolerance	VIF
Parity	.619	0.008	1.01	80.60	< .001	.947	1.056
Mother-to-infant attachment	.133	0.008	.22	17.17	< .001	.947	1.056
Adjusted R ² =.974, F=3,248.95, p< .001						Durbin-Watson=1.860	

(Korean Statistical Information Service [KOSIS], 2010). Compared to the results of previous studies, this study attempts to seek nursing measures and strategies to promote self-confidence in the maternal role of early postpartum mothers.

In this study, mothers whose average monthly household income is greater than 3 million won showed higher self-confidence in the maternal role than mothers with less than 3 million won and this indicates that the higher the economic level is, the higher the adaptation to the maternal role is. These findings are similar with the previous study that mothers with a high economic status adapted to the maternal role better (Chae, 2005). Given that the average monthly income per household is 3.29 million won (KOSIS, 2010), Nursing Intervention Programs that strengthen self-confidence in the maternal role of mothers at low socioeconomic levels are necessary.

A multipara who experienced delivery showed higher self-confidence in maternal role performance than a primipara. This result was consistent with the findings of Oh (2001) that the degree of self-confidence in maternal role performance of a postpartum primipara was lower than that of a multipara. It is considered to be the result caused by the experience of parenting a baby in case of a multipara who experienced delivery. However, the study of Lee (1994) targeting postpartum 4-month mothers reported that multipara showed higher maternal role

strain than primipara and like primipara, multipara also experienced the transition to maternal role for a new baby after childbirth. There was also a difference from the study reporting that just simple delivery experience and parenting did not lead to self-confidence in maternal role performance (Kronborg, Vaeth, Olsen, Iversen, & Harder, 2007). Therefore, in future studies, repetitive studies identifying the relationship of self-confidence in maternal role performance depending on the experience of birth may be needed.

Mothers who participated in prenatal classes showed higher self-confidence in the maternal role than mothers who did not, and it turned out that prenatal education has a positive effect on self-confidence in the maternal role. This is consistent with the study of Oh, Sim and Kim (2002) which reported that a group that received prenatal education showed a more significant difference in postnatal self-confidence in the maternal role than a group that did not receive it. Also, the study of Chae (2005) reported that mothers who prepared for delivery well by participating in a prenatal class adjusted to the maternal role better, but there was no significant difference depending on the people who helped with postnatal care. Thus it is considered that after being pregnant, preparing for delivery, can give practical help to postnatal maternal role performance.

The average score of self-confidence in the maternal role of early postpartum mothers was 36.77 ± 4.28 . It

turned out to be approximately in the middle. This result is similar to the result of Lee (1992)'s study who used the same tool as used in this study. In the study of Lee and Kwon (2006) targeting mother-infant that also used the same tool, self-confidence in the maternal role was 3.06 points and it turned out to be slightly higher than in this study. These results may be due to the fact that while the study of Lee and Kwon targeted 5~7-month-old mother-infants, this study targeted early postpartum women. Therefore, since formation of the maternal role shows different patterns depending on the rearing environment and time (Emmanuel et al., 2011), a longitudinal study comparing formation of the maternal role depending on the period after childbirth will be needed in future studies.

It turned out that there was a negative correlation between childcare stress and self-confidence in the maternal role of early postpartum mothers. Not many studies explained the relevance between childcare stress and self-confidence in the maternal role targeting mothers. So, we must pay close attention because the measurement tools are not the same but the findings of this study are the results supporting the study of Lee and Kwon (2006) showing that self-confidence in the maternal role is inversely correlated with the degree of childcare stress. However, in the study of Kronborg et al., (2007), women who had experienced giving birth before made the transition to the maternal role in a similar manner as women who gave birth for the first time. It is different from the study that high stress is experienced because of the burden for raising other children including the new baby. It can be difficult to compare them directly, but this study showed that there is no significant relationship between childcare stress and maternal self-esteem. In the study of Song, Chang, & Kim (2008), parity was explained as an important variable for the effective factors of childcare stress of women using postpartum care facility, so following studies must verify the relationship between self-confidence in maternal role performance and childcare stress by controlling or considering it importantly.

In this study, mother-to-infant attachment was one of the major influencing factors in self-confidence in the maternal role of early postpartum mothers. However self-confidence in maternal role performance and mother-to-infant attachment showed weak negative correlation although it was not statistically significant. It is similar to the result of Kim, Park, Lee, Moon, & Park (2005)'s study whose subject was women using postpartum care facilities. The result was that the score for self-confidence in the maternal role of experimental groups us-

ing message to increase mother-to-infant attachment was slightly reduced from a score of 32.0 before the experiment to 31.6 after the experiment. The cause is that mothers requests for rest rather than consider childcare although they have affection for the new baby. However, they are accustomed to motherly behavior when the premise is that they are with their children, so it is necessary to let them recognize the importance of the rooming in system and is also necessary to encourage mothers' efforts while in postpartum care facility.

Also, self-confidence in maternal role performance and mother-to-infant attachment are not statistically significant with social support, but there was a weak negative correlation. In the study of Suh and Huh (cited in Song et al.,, 2008), the things that mothers regard as important in postpartum care facility are in this order: sanitation (50.0%), physical recovery of the mother (27.4%), breast-feeding (11.3%). And full caring and social support right after childbirth should be expected from dependent and passive mothers, so the process of obtaining maternal role is reduced. Therefore, for the culture of Korean postpartum care, mothers should be especially cared for, during the first three weeks after childbirth, so care is needed when interpreting the correlation between self-confidence in maternal role performance and social support. Also, following studies must re-verify the correlation between self-confidence in maternal role performance and social support.

Therefore, based on the results mentioned above, this study proposes further research concerning the verification of the effects of the mother-to-infant attachment promotion program in the postpartum care facility after childbirth through a prenatal classroom that strengthens prenatal information and childcare stress management.

However, since this study selected subjects by the random expression method, while targeting mothers in only one postpartum care facility, generalizing the findings to all mothers belonging to the early postpartum period should be done with caution.

CONCLUSION

This study is a descriptive research aiming to understand the level of self-confidence in the maternal role of a mother in early postpartum period who is using a postpartum care facility, and to identify its related influencing factors. As a result of this study, it was found that self-confidence in the maternal role had a negative correlation with childcare stress, and the influencing factors on the self-confidence in the maternal role were parity

and mother-to-infant attachment. Accordingly, in case of multiparas, this is seen as the influence of previous childbirth and parenting experience so primipara should also be encouraged to actively participate in prenatal classes and get help from exchange of information by forming a network with other prenatal class participants. Also, when making prenatal class programs, the contents of the measures to reduce childcare stress of mothers and to improve mother-to-infant attachment need to be complemented.

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Summary Statement

■ What is already known about this topic?

In case of self-confidence in the maternal role, research was conducted mainly targeting mothers who gave birth to premature infants and was related to maternal self-esteem, child care stress and social support.

■ What this paper adds

Self-confidence in the maternal role of early postpartum mothers with healthy normal baby was correlated with child care stress; and parity and mother-to-infant attachment were the influencing factors of mothers' confidence in their maternal role.

■ Implications for practice, education and/or policy

To strengthen self-confidence in the maternal role of early postpartum mothers, prenatal class programs need to be complemented to reduce childcare stress and promote mother-to-infant attachment by providing actual information on parenting.