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The Effect of the Family Delivery on Postpartum Depression and the Maternal Attachment

Shinhong Min*

Department of Nursing, BaekSeok University, Korea;
shmin@bu.ac.kr

Abstract

Background/Objectives: Delivery is the most noble process in women's life. Thus further studies were performed to investigate the ways to manage them effectively. **Methods/Statistical Analysis:** The research tool was the questionnaire about the postpartum depression and maternal attachment formation, used for the experimental group who did the family delivery in the family delivery and the comparison group who did the general delivery in the general delivery room. Data analysis was done using the program SPSS ver.18.0, and general characteristic used the frequency analysis and homogeneity test of the experimental group and comparison group used t-test. **Findings:** The results of this study are as follows. 1. The general characteristics of the experimental group and comparison were found homogeneous in the variable. 2. Mothers who did the family delivery in the family delivery room had the lower postpartum depression scores than the mothers who did general delivery in the general delivery room. 3. Mothers who did the family delivery in the family delivery room had the higher maternal attachment formation scores than the mothers who did general delivery in the general delivery room. **Application/Improvements:** The family delivery appears to have a positive effect, so it is believed that it can be used as a more effective way if applied in a variety of situations.

Keywords: Family Delivery, Maternal Attachment, Postpartum Depression

1. Introduction

Delivery is the one of the most important process among many crisis situations, and women can live a more mature life by overcoming this crisis positively[1]. The situation of delivery is not just an individual experience, but pregnant women, their spouses and families experience family as the most full with a forceful emotional, and each of the family members are significantly associated with each other emotionally, spiritually and culturally[2]. Most of the labors were done in the house in the past, therefore, mothers of pregnant mothers or experienced seniors with many experiences in premature birth in the region, or midwives with specialized functions helped the mothers. In this situation, the pregnant mother gave birth to a child receiving the support of parent's mother or mother-in-law, and the spouse, thus, experienced delivery was made jointly between family members through mutual support[3]. But today, people are looking for the hospital for the effectiveness in maternal mortality and morbidity and perinatal mortality reduction, because of the lack of human and empirical resources, to get the calving assistance in accordance with the changes in the family structure and the development of aseptic technique, antibiotics and the high-tech medical equipment.

Although the hospital deliveries are done for many advantages, today's nuclear family trend make it difficult to rely on the assistance of a primary group, of relatives, etc, and place mothers in anxiety, tension and depression because of lack of human resources to communicate and support and information for successful parenting can't be obtained. So this is a trend that the incidence of postpartum depression is increasing because of this complex situation[4]. The frequency of this postpartum depression, generally have shown about 10 to 20% of incidence in the case of our country[5]. And active interest management according to the degree of incidence of depression or postpartum depression it is required[6]. Because most of the women are susceptible to postpartum depression, postpartum depression is easily overlooked, and yet there

* *Author for correspondence*

are not fully recognized in the aspect of the prevention, care, and therapy, so the importance of postpartum depression management for the health and safety of the child and mother, and the family is emphasized[7]. Postpartum depression occurs in such diverse ways from the emotional symptoms to pathological symptoms after childbirth, and about 75 percent of postpartum mothers experience these emotions. And it appears as wanting to cry for no apparent reason, anxiety, weariness, disappointment, helplessness and unworthiness[8]. After delivery, emotionally unstable state is caused by an imbalance of the autonomic nervous system because of the changes in hormones and there is a lot of burden and responsibility on the new role of mother. And they altogether causes tension that one feels psychologically depressed feelings[9]. The higher postpartum depression there is, the lower degree of maternal attachment there is[10], so, the psychological management of postpartum maternal postpartum depression can be seen as important. And if the degree of postpartum depression is severe or prolonged, it brings harm to the acquisition of maternal role by inhibiting the binding and attachment formation of the mother and child, and causes any negative impact on the development and growth of the child. Because, if there is a problem in the interaction with the mother at the age of early, it causes a bad influence on the cognitive, emotional and social development[11].

Maternal attachment is affection ties to ensure the infant's survival and stability, with the social relations of infants and mothers formed after early birth, and an emotional bond resulting from the relationship of the mother and child[12]. Since maternal attachment is formed by the relationship between the infant and mother who is the primary care giver in infancy, mother's role carries great importance, from the aspect of the characteristics of infant's developmental stages and social surrounding around infants. And neonatal period is the important and sensitive period for the interaction between the mother and infant and maternal attachment, so the attachment formed right after the birth is persistent and has a long-term impact on the role as a mother and growth and development of the infant[13]. It can be seen that the relationship between the mother and fetus begins with the pregnancy, but the practical formation of the relationship between mother and infant begins to be achieved after giving birth, so the matters related to the maternal attachment is very important to neonatal period right after birth. Thus intervention for the formation of healthy relationship between the mother and infant is needed in this period[14].

Another trend of today's mothers is delivering in the comfortable and familiar environment while receiving the physiological and social support, rather than in the institutionally uniformed and standardized conditions[15]. Also As the higher interest of the people for the labor, tending to participate in the process of delivery of family is increasing, and it is shown in many studies that the delivery with family's participation has a various positive effect, such as reduction of the pain for mother, and reduction of the side effects and so on[1]. This family delivery provide the opportunity to experience the positive change as a result of physical and mental potential of changes of roles within a family, their faith, beliefs, attitudes and the result of struggling for couples and families

Therefore, in this study, this researcher would like to confirm the effectiveness of the family delivery for ways of lowering the postpartum depression and increasing maternal attachment, by identifying the effects of family delivery on maternal postpartum depression and maternal attachment.

2. Research Method

2.1 Research Design

This study was designed as a quasi-experiment study to verify the effects of family delivery on maternal postpartum depression and maternal attachment, and the research plan is a non-equivalent comparison group post plan.

2.2 Research Objects

This study was targeted the mother who is in D megalopolis from 9th, March, 2015 to 12the June, 2015, gave birth to a child in A Women's hospital and admitted to the hospital on postpartum care centers. The reason why sampling target is limited to one Women's Hospital was for maintaining homogeneity by excluding the impact of the environment and the characteristics of each hospital on the specific variable. The specific criteria of the subject are as follows.

- Mothers with age over 20.
- Mothers who gave birth to a child in pregnancy 37-42 weeks.

- Mothers without the complications such as preeclampsia or gestational diabetes, and who had a normal vaginal birth mothers.
- Pregnant women who delivered healthy newborns.
- Mothers who Understood the purpose of this study and have agreed to sign a research participation.
- Mothers who was with a minimum of one people or above of the family members such as the husband, parents mother or mother-in-law, in the family delivery room.

The number of participants sample was calculated on the basis of the statistical program G. Power 3.1. Effect size is about the middle, not related to the preceding studies, and when the effect size (0.5), the significance level (0.05), statistical power (0.8), when the number of groups is 2, there were 34 people in each group of 34. The initial subjects of the study group considering the dropouts, there were 36 people of experimental group and 36 people of comparison group, and all of them were maintained to the final.

2.3 Research Tool

2.3.1 Postpartum Depression

This researcher has obtained the consent of using postpartum depression measurement tools developed by[16] and then used it. This tool is composed of 7 factors of postpartum depression on the 'emotional aspect 13 questions, the cognitive aspect 7 questions, the relationship with the baby aspect: Negative feelings for the baby 6 questions, feeling of burden for the baby 8 questions, negative self-identity 5 questions, the physiological aspects 4 questions, the interpersonal aspects 3 questions, a total of 46 questions consisting of seven factors'. And it is consisted of a four-point scale from 'always yes' 4 points to' not at all' 1 point. The possible score of this tool is from 46 points to highest 184 points, meaning that the higher the score, the higher the degree of postpartum depression. 50~75 points belong to the normal range as the average level, 76~85 points is mild depressive state, more than 86 points means a severe depressive state. Reliability was Cronbach' α = .96 at the time of the development of the[17], and was 0.89 in this study.

2.3.2 Maternal Attachment

In[18] designed Maternal Attachment Inventory to measure mother's attitudes about infant attachment, 13 used the modified and supplemented tool. And it is consisted of a four-point scale of self-report form from 'always yes' 4 points to' not at all' 1 point. And the total is 26 questions. The possible score of this tool is from lowest 26 points to highest 104 points, meaning that the higher the score, the higher the degree of maternal attachment to the infant. Reliability was Cronbach'α = .89 at the time of the development of the[13], and was 0.87 in this study.

2.4 Research Process

Data collection took place from 9th, March, 2015 to 12th, June 2015. This researcher Obtained agreement on research cooperation in advance, and data collection methods were subject to a structured questionnaire to be filled by self-responses or with the help of the guardian. In other words, Mothers of the guardians directly marked the level of the postpartum depression and maternal attachment to the mother who was assigned in the experimental group who gave birth to a child in the family delivery room and hospitalized in the postpartum care centers. Data were collected via the same procedure as experimental group without the using the family delivery room, and after explaining the purpose of the study, and receiving informed consent.

2.5 Data Analysis

Data analysis was processed using computerized statistics using SPSS ver. 18.0 program, and analyzed as follows:

- General Characteristics of the subjects were calculated as the real number and percentage.
- Homogeneity test of the general characteristics of the experimental group and comparison group was analyzed by χ^2-test.
- The t-test was validated in order to compare the differences in postpartum depression and maternal attachment score between the experimental group and comparison group.

3. Research Findings

A result of testing the general characteristics and homogeneity of the experimental group and comparison group is shown in Table 1. Looking at the age of the experimental group, 30 years of age and younger was the most common, and was 18 people (50.0%), 31-34 years of age was 16 people (44.4%), 35 years of age and older was 2 people (5.6%) and the overage age was 30.64 years old.

In the comparison group, 30 years of age and younger was 20 people (55.6%), 31-34 years of age was 14 people (38.9%), 35 years of age and older was two people (5.6%) and the average age was 30.25. So the statistical difference between the two groups didn't appear. Educational status appeared to have no differences with the number of the experimental group 28 people (77.8%), and the comparison group 29 people (80.6%) as there were many college graduates. Statistical differences of occupation showed that the experimental group had 19 people (52.8%), and the comparison group had 18 people (50.0%) who said that they had an occupation, so, there was no statistical difference shown between the two groups. About the economic status, there was 18 people (50.1%) who answered as 'high' in the experimental group and there was 11 people (30.6%) in the comparison group, but there was no statistical difference. In the case of the experimental group, there are 22 people (61.1%), who had a religion in the comparison group and 19 people (52.8%) in the comparison group. For the question of pregnancy planning group, 28 people (77.8%) in the experimental group, and 26 people (72.2%) in the comparison group said that they had pregnancy under the plan, so there was no statistical differences. And for the question of prenatal education, 16 people (44.4%) in the experimental group, 14 people (38.9%) in the comparison group answered that were received the education. For the question of gestation, there were 19 people (52.8%) in experimental group, and there were 18 people (50.0%) in the comparison group who had 39 weeks of the gestation or less, so there were no differences. In other words, the age, education, occupation, family, economic, religious affiliation, pregnancy planning, prenatal education status of the study targets, indicated that there are no significant differences between the two groups, and homogeneity between two groups were confirmed.

A result of Postpartum depression and maternal attachment is shown in Table 2. In the case of Postpartum depression, there were average 2.58 ± 0.073 points in experimental group, and there were average 2.63 ± 0.088 points in the comparison group who had the family delivery in the family delivery room, so there was a significant difference between the two groups in the average ($t = -2.345$, $p = 0.022$). In the case of maternal attachment, the experimental group had 3.40±0.184 points and the comparison group had 3.26±0.124 points, so there was a significant difference. ($t = 3.785$, $p<0.001$).

Table 1. Homogeneity test of general characteristics between experimental and control groups (N=72)

Characteristics	Categories	Exp.(n=36)	Cont(n=36)	t or χ^2	p
		n(%)	n(%)		
Age	≤ 30	18(50.0)	20(55.6)	0.610	.542
	31-34	16(44.4)	14(38.9)		
	≥ 35	2(5.6)	2(5.6)		
	M±SD	30.64	30.25		
Education	≤ High school	8(22.2)	7(19.4)	0.084	.772
	≥ College	28(77.8)	29(80.6)		
Occupation	Have	19(52.8)	18(50.0)	0.056	.814
	Have not	17(47.2)	18(50.0)		
Economic state	High	18(50.1)	11(30.6)	2.967	.227
	Middle	12(33.3)	18(50.0)		
	Low	6(16.7)	7(19.4)		
Religion	Have	22(61.1)	19(52.8)	0.510	.475
	Have not	14(38.9)	17(47.2)		
Pregnancy plan	Yes	28(77.8)	26(72.2)	0.296	.586
	No	8(22.2)	10(27.8)		
Pregnatal education	Yes	16(44.4)	14(38.9)	0.229	.633
	No	20(55.6)	22(61.1)		
Pregnancy week number	≤ 39	19(52.8)	18(50.0)	0.056	.814
	≥ 40	17(47.2)	18(50.0)		

Table 2. Comparison of postpartum depression and maternal attachment

	Experimental group	Control group	t	p
Postpartum depression	2.58±0.073	2.63±0.088	-2.345	0.022
Maternal attachment	3.40±0.184	3.26±0.124	3.785	0.000

4. Discussion

As results of this study, the family delivery in the family delivery room has a impact on reducing the postpartum depression, and increasing the maternal attachment. Family delivery is a meaningful experience not only for the mothers who are experiencing child birth directly, but also for their family, and is the most impressive, emotional, rewarding perception of personal life among phenomenons that human can perceive[19]. It can be seen as a result of the same meaning as that the emotional support of a spouse have a positive effect on a pregnant mother, by thinking that delivery is the social and cultural event which the physiological, social and family relations is intervened rather than thinking the delivery as physiological and painful experience which the mother experience[20,21].

In[22] which has the positive effect on the bond of parent-children by the participation of spouse in the family delivery, in[23] which reported that the infant and the mother experienced stronger closeness by the participation of spouse in the birth process, and in[24] which reported that the participation and comfort of the family is the main factor to strengthen the safety and ability to cope with labor, all support for the benefit of having the family delivery. In addition, the result of the study that says the women with the support of the spouse by actively participating during the birthing process has less complications experienced, a stronger closeness to the baby, and the higher self-esteem as well as promoted esteem supports the same result[25].

In addition, postpartum depression has the negative effect on the quality of life of mothers, as well as the baby's emotional, behavioral, and cognitive development, so the active effort for the management is needed. In the study[26], it reported that the birth mother at the early stage has lower stress level as there is more supportive acting by a spouse, and also, In[27] the supportive acting by a spouse is an important factor which has impact on postpartum depression, and it prevents and lower postpartum depression. In addition to this, as interventions for postpartum depression, aromatherapy, hip bath, music therapy and dance therapy, psychological song programs, natal laughter programs, promotion programs for appreciation were researched and were shown to be effective[28–30] as interventions for postpartum depression. Because these are all arbitration after childbirth, promoting ways reduce postpartum depression through family delivery can be meaningful if the situation allows prior to this.

What is found above are like these. Family deliver in the family delivery room reduces maternal postpartum depression, and has an impact on increasing the maternal attachment. These results will be used as evidence to help contributing to positive emotions for the mother, even emotional health of the infant. The following suggestions to the study based on the results.

Based on this study, this researcher would like to propose as followings. In this study, there is a need to develop the changes or interventions that may affect the postpartum depression and maternal attachment and there is need to look for the effect of other variables other than postpartum depression and maternal attachment because there is some situation which family delivery is also a difficult in many various situations.

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