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The Impact of Training Given to Nulliparous Pregnant Women for Attaining Identity and being Satisfied with the Maternal Role

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Abstract

Introduction: Maternal role is competence, skill and satisfaction of a woman who, as a mother, has maternal understanding and feeling for the infant.

Objective: This study aimed at determining the impact of training on nulliparous Pregnant women in attaining identity and satisfaction with the maternal role.

Materials and Methods: This is a quasi-experimental intervention study. This study was conducted on 100 pregnant women referred to health centres affiliated to Tehran University of Medical Sciences in 2013. The sample consisted of 45 subjects in the intervention group and 47 subjects in the control group.

Inclusion criteria were gestational age of 36 weeks or more, age of 18 and above, living with a partner, no physical or mental illness, no record of alcoholism and drug abuse, having at least passed third grade in secondary school, Iranian citizenship and no history of participation in courses on baby care.

Training classes were held 3 times for pregnant women in the intervention group. The first and third sessions included training, slide shows with lectures and questions and answers; but the second session included practical training on baby showers and film screenings. At the end of these sessions, a booklet containing baby care training material was provided to the mothers. The booklet contained training material including umbilical cord care, how to breastfeed and related problems like fissures and mastitis, among others. It also included how to use iron and multivitamins, vaccination of infants, care for infants, their shower, their clothes, mother and infant nutrition, prevention and healthcare of infant in case of urinary tract burns and care and necessary actions in case of fever, diarrhea or bloating, etc..

In this research, data gathering tools included questionnaire (personal information and maternal identity questionnaire in the third trimester of pregnancy, maternal identity questionnaire in postpartum and maternal satisfaction questionnaire). Descriptive statistical and analytical tests including Chi-square test, Fisher's exact test, Friedman test as well as T-paired and independent T-tests were used to analyse the data.

Results: Comparison of individual properties and maternal identity level before the intervention in two groups showed no significant difference (P> 0.05). Statistical test showed

no statistically significant difference between the intervention and control groups in terms of maternal identity, in pre-training levels, 6 and 12 weeks after delivery; but mean maternal satisfaction in weeks 6 (P<0.001) and 12 (P<0.001) after delivery had a statistically significant difference between the two groups.

Conclusion: According to this study, it seems that improvement in maternal identity has not been possible by short-term training and needs broader intervention. According to the impact of training on maternal satisfaction, it recommended to offer infant care training programmes for promoting a sense of empowerment in mothers for better child care.

Keywords: **Pregnant Women, Personal Satisfaction, Education**

Introduction

Being a parent is the process of attaining and developing parental role beginning with pregnancy [1]. Maternal role begins from the period of pregnancy and continues until 4–6 months after delivery [2]. Maternal role is an important learning process for women that continues and evolves by the growth of infant [3]. Successful adaptation to the maternal role gives a mother more confidence and satisfaction for infant care [4].

In accepting the maternal role, the type of relation between a pregnant woman and the mother in her is important. A mother needs emotional support, especially from the husband to adapt to the role [1]. Maternal role can be expressed as reliance, self-esteem, competence and skills, and satisfaction. Maternal role is the understanding and feeling of mothers as an infant's mother and a part of the whole maternal identity. In fact, she should feel comfortable as a mother. Maternal role attainment is formed based on three concepts: a) maternal identity b) maternal competence and c) maternal presence [5].

Rubin introduced the theory of maternal role attainment in 1967. In his view, the process of maternal role attainment and evolution includes imitation, role playing, fantasy, dreaming and searching for the right role as well as despondent and development of the maternal role [6]. Maternal identity development (MID) prompts a woman to catch up with maternal behaviour [7]. Factors such as violence or lack of social support can result in a reduced in maternal identity [8].

The sense of loving the embryo is a good sign of being a mother and pregnant women continue to attain maternal skills with more encouragement. In the third trimester, expecting a baby increases the activity of woman for preparedness for delivery — choosing a name for the baby and preparing the baby's clothes and room [9]. Mothers, who receive clinical or professional assistance for the care of children, show better response as parents [3]. A child's growth is influenced by genetic factors, physiological environment and relationship between mother and child [10]. The role of each person is attained on the basis of gender, age, status at birth or training [11]. Interactive patterns are formed in the family. The beginning of relationship between the mother and child is often from the moment of birth, which has a significant impact on the mental, emotional and social development of the child [12].

Maternal weakness causes a sense of safety reduction if it occurs in early childhood and may be associated with the risk of development delay, behavioural problems and child abuse [13]. Being a new mother changes the person's life fundamentally and makes it more complicated; not only is it accompanied by increasing difficulties and sufferings, but also deepens the parental concept [14]. Satisfactory transition to motherhood

means a period of satisfaction, understanding pleasure, receiving reward and happiness of the mother; maternal satisfaction requires having maternal identity and role [15]. About half the parents awaiting birth of their first child are worried about playing the right paternal role [16]. The concern of women in this field is often more than men [17].

Despite the importance of the need for training and consultation at the time of marriage and prenatal care for empowerment during pregnancy as well as enhancing the skills of mothers, little attention has been paid to the positive development of maternal role in recent years. We have limited information about knowledge and power of Iranian mothers to start pregnancy and factors that influence it. Most training programmes are based on prenatal care, mother's nutrition and maternal complications during pregnancy. Therefore, in order to facilitate nulliparous mothers to attain satisfaction and identity, the researcher decided to conduct a study in order to determine the impact of training on maternal role attained by midwives in emphasizing the concepts of maternal identity and satisfaction. Therefore, the researcher started training from prenatal period to prepare mothers; he continued training after delivery to establish the teachings and respond to unmet needs of women facing the situation in a better way.

Materials and Methods

This is a quasi-experimental study conducted on nulliparous women who were referred to health centres affiliated to Tehran University of Medical Sciences in southern Tehran region. The venue of research was the prenatal care unit of health centres. Four health centres affiliated to Tehran University of Medical Sciences were selected due to the large number of visitors. Two centres were assigned to 2 intervention groups and 2 centres to the control group. Since no similar studies have been done in Iran, choosing p=0.05 (desirable maternal role and high stress) and expecting improvement — good maternal role index to 0.9, and confidence level of 95% and test power of 95%, the number of samples in each group was determined to be 34. Anticipating the possibility of loss of some samples, 50 subjects from each group, that is 100 subjects, were sent for calculation. At the end, due to loss of some samples, the number of subjects in the intervention and control groups was reduced to 45 and 47, respectively. Sampling continued from June to December 2013.

Inclusion criteria were gestational age of 36 weeks or more, age of 18 or older, living with a partner, no physical or mental illness, no record of alcoholism and drug abuse, at least third grade pass in secondary school, Iranian citizenship and no history of participation in courses on baby care.

Exclusion criteria included unwillingness of research departments to continue participation in the project, consumption of medicine by the mother, including drugs, which affect the nervous system, occurrence of a traumatic event or loss of a close relative, abnormal births, embryo or infant death and non-participation in the second or third sessions.

In the intervention group, 3 mothers were excluded due to the location and infant death and because of personal problems. In the control group, three were excluded, 2 due to non-delivery of the questionnaires, and 1 due to location changes. Thus, 45 subjects in the intervention group and 47 subjects in the control group accompanied the researcher during the study.

For this research, researcher began sampling after obtaining the approval of authorities of the centres. Mothers eligible for inclusion were included in the study after completion of information on the consent form. In this research, data gathering tools included 4 questionnaires of personal information and maternal

identity in the third trimester of pregnancy, maternal identity questionnaire in postpartum (10 questions) and maternal satisfaction questionnaire (9 questions). Questionnaires of personal information and maternal identity in the third trimester of pregnancy were completed by mothers in the first session before beginning the training. Maternal identity and satisfaction questionnaires were given to mothers in the third session of training.

In accordance with previous studies on the maternal role and consulting psychology professor, questionnaires were completed 6–12 weeks after delivery, in order to give them to the health centre after completion. The mothers in the intervention group were asked to call the researcher in case of any problem. The researcher called every 2 weeks to investigate the problems and uncertainties associated with research units of the groups. Questionnaires of the control group were placed at their disposal in the session of initial questionnaire completion. After a full explanation about the time of completion, they were asked to complete questionnaires and deliver them to the respective centres. Follow up of samples was done by phone.

In this study, three training sessions were held for pregnant women in the intervention group (2 sessions before delivery and the third session after delivery). The first and third sessions lasted at least 90 minutes and the second session was held for at least 60 minutes. The second session was held a week after the first and third sessions in a range of 10–25 days after delivery.

The first and third sessions included training, slide show with lectures and questions and answers; but the second session included practical training for baby shower and film screenings. Sessions were held in groups of 3–8 members, and at the end of these sessions, the booklet containing training material of baby care was given to the mother; the materials were the same training items in the class but with more details. The booklet contained training material, including umbilical cord care, how to breastfeed and related problems like fissures and mastitis and relevant care. It also included how to use iron and multivitamins, vaccination of infants, care for infants, about shower, clothes, mother and infant nutrition, prevention and healthcare of infant in case of urinary tract burns, care and necessary actions in case of fever, diarrhea or bloating.

Training in power-point was given to mothers at the end of the first and third sessions, while the CD containing film was delivered to mothers at the end of the second session. Necessary training on babies up to six months was given in the third session.

Maternal identity and satisfaction questionnaires were scored based on the Likert scale from strongly disagree (score 1) to strongly agree (score 5); higher score indicated that the situation was better. The total score of maternal identity and satisfaction was obtained from the sum of scores of the answer of every question. The score ranged from a minimum 10 to a maximum 50 for maternal identity and minimum 9 and maximum 45 for maternal satisfaction.

Maternal identity attainment scale was designed by the researcher for two stages; the first one for the third trimester, and the other one for infancy. It is designed based on the concept of maternal identity and comfortable feeling in playing the maternal role according to the definition of Miles [5]. The questionnaire validity was evaluated by 10 faculty members with expertise in reproductive health, psychology and medical education, and its reliability was tested on 10 patients as the research began; reliability and validity were satisfactory. Cronbach's alpha of the maternal identity questionnaire was calculated at 0.71 in this research.

Maternal satisfaction questionnaire was designed by Gibaud & Wallston (1978) and it is a part of parenting sense of competence scale (PSOC) [18]. This scale is an international standard tool validated in multiple studies. Questions of the questionnaire were translated into [In persian] and retranslated, both of which were done by translators fluent in English. Receiving the comments of 10 faculty members with expertise in reproductive health, psychology and medical education, the content in the questionnaire was termed valid. In this study, the questionnaire's internal reliability was evaluated as optimal (Cronbach's alpha = 0.83).

Descriptive statistical and analytical tests, including Chi-square test, Fisher's exact test, Friedman test, T-paired and independent T-tests, were used to analyse the data considering a significance level of 0.05. Data was analysed with SPSS 16.0 software.

Results

The results showed that the average ages of mothers in the intervention and control groups are 24.54 ± 4.14 and 24.20 ± 4.35 years respectively, in the t-test. T-test showed that the two groups were matched in terms of age. The average ages of husbands in the intervention and control groups were 28.56 ± 3.48 and 28.46 ± 4.51, respectively; there were no statistically significant differences. In terms of jobs, the majority of mothers in both groups were housewives and more than half of their husbands were workers. Chi-square test showed no significant difference between the two groups in terms of occupation of subjects (P = 0.75) and their husbands (p = 0.58). More than half of the mothers in both groups believed that the family income was sufficient. According to Chi-square test, there was no statistically significant difference between the two groups and both groups were similar in terms of income (p = 0.83). Chi-square statistical test showed no significant difference between the two groups in terms of the mother's education level (p=0.97) as well as the husband's (p=0.78). The highest frequency of subjects' gestational age at the time of inclusion was 36 weeks in both the groups (p=0.40).

The two groups were homogeneous in terms of history of abortion (p=0.46), intentional pregnancy (p=0.71) and history of infertility (p=0.61). There was no statistically significant relationship between the mothers and the study group in terms of support and cooperation in maintenance of the infant by the mother, sister or relatives (p=0.892). Type of mother's feeling toward the current pregnancy was "pleased and hope" in majority of women in both groups. According to Fisher's exact test, there was no statistically significant difference between the two groups (p=0.775), and the two groups were similar in terms of sense of pregnancy.

According to the results, there was no statistically significant difference (p=0.914) in the mean score of maternal identity before training in mothers of the intervention group (37.54 ± 3.90), and the control group (37.62 ± 3.45) and the two groups were homogeneous.

According to Friedman's test by "comparing maternal identity before and after intervention in the control group", there was no statistically significant difference (P=0.118) in the mean scores of maternal identity in pre-training levels, 6 and 12 weeks after delivery. Moreover, "comparing maternal identity before and after intervention in the intervention group" showed that despite relative increase in maternal identity scores in the intervention group in both periods of 6 and 12 weeks after delivery compared to the period before delivery, the mentioned changes were not statistically significant

Table 1. Comparing maternal identity before and after intervention in both control and intervention groups

Group	Identity score	Before intervention		6 weeks after delivery		12 weeks after delivery		Sig.*
		%	No.	%	No.	%	No.	
Control group	Weak (30 or less)	0	0	1	1.2	1	1.2	
	Average (31–40)	44	88	36	76.6	37	78.7	
	Good (41 or more)	6	12	10	21.3	9	19.1	P= 0.118
	Total	50	100	47	100	47	100	
	Mean ± SD	37.62 ± 3.45		37.12 ± 3.99		37.65 ± 4.15		
Intervention group	Weak (30 or less)	1	2	2	4.4	-	-	
	Average (31–40)	38	76	28	62.2	26	57.8	
	Good (41 or more)	11	22	15	33.3	19	42.2	P= 0.458
	Total	50	100	45	100	45	100	
	Mean ± SD	37.54 ± 3.94		38.55 ± 4.42		39.17 ± 3.90		

*Pare T-Test

(P=0.458) (Table 1). Table 2 compares the maternal satisfaction of both groups between the periods 6 and 12 weeks after delivery.

Comparing the maternal satisfaction in both groups showed that it increased at the 12th week compared to 6 weeks after delivery in both intervention (P=0.002) and controls (P<0.006) groups.

As can been observed, there is statistically significant difference between mean scores of maternal satisfaction in the intervention and control groups in both periods of 6 (P<0.001) and 12 weeks (P<0.001) after delivery. Comparing mean scores of maternal satisfaction at 6 and 12 weeks after delivery between the two groups, it can be concluded that mean score of maternal satisfaction in the intervention group is significantly higher than the control group in both periods (table 3).

Discussion

This study showed no statistically significant difference between the intervention and control groups in terms of mean maternal identity in pre-training levels, 6 weeks and 12 weeks after giving delivery.

Hyun-ju et al., designed a descriptive-analytical study in South Korea to determine predictors of maternal identity in Korean nulliparous women. The main objective of that study was to evaluate the positive impact of a training programme on the formation of a maternal identity in postpartum period for pregnant mothers. Although the executable programme of Hyun-ju was different from the programme in this study, the common aspect of both studies was the impact of educational programmes on the maternal identity satisfaction [15].

Table 2. Comparing maternal satisfaction mean scores in the mothers under study at weeks 6 and 12 after delivery in both intervention and control groups

Group	Maternal satisfaction score	6 weeks after delivery No. (%)	12 weeks after delivery No. (%)	Sig.*
Control group	Medium (19 to 25)	6 (13.3)	3 (6.7)	P= 0.002
	Good (26 to 35)	30 (66.7)	28 (62.2)	
	Excellent (36 or more)	9 (20)	14 (31.1)	
	Total	45 (100)	45 (100)	
	Mean ± SD	29.57±4.479	30.66±4.842	
Intervention group	Medium (19 to 25)	21(45.7)	13 (27.7)	P= 0.006
	Good (26 to 35)	24(52.2.7)	30 (63.8)	
	Excellent (36 or more)	1(2.2)	4 (8.5)	
	Total	47(100)	47 (100)	
	Mean ± SD	24.36±4.565	26.27±4.332	

*Pare T-Test

Table 3. Comparing maternal satisfaction mean scores after intervention in both intervention and control groups

Group / Variable	Intervention Mean ± SD	Control Mean ± SD	Sig.*
6 weeks after delivery	29.57 ± 4.47	24.36 ± 4.56	p< 0.001
12 weeks after delivery	30.66± 4.84	26.27± 4.33	P< 0.001

*Pare T-Test

Another study was carried out by Miles et al., entitled "Maternal role attainment with children vulnerable during the first year of life". The study showed that mothers with vulnerable children showed higher maternal identity [5].

Ozkan and Polat conducted a study in Turkey to evaluate the impact of training on maternal role attainment in 120 mothers (60) subjects in control group and 60 in intervention group), and the impact of training in periods before and after delivery using a questionnaire applied for maternal identity evaluation. Questionnaire score was significantly higher in the intervention group after training compared to the period before training. But no significant difference was observed in the scores of pre-test and final test of the control group. The study showed that after training, the mean score of maternal identity in the intervention group was significantly higher than the control group. The reason for the differences between results of the current research study and the one mentioned can be time difference in training. In the study of Ozkan and Polat, training started from the 30th week onwards, while in the current study, training took place from the 36th week [7]. Also, according to results of the current study, the impact of training was associated with maternal satisfaction in the intervention group.

In the study conducted by Chan and Ngai that aimed to determine the relationship among stress, competence and maternal role satisfaction in periods 6 weeks and 6 months after delivery, the maternal satisfaction score was significantly increased in 6 months compared to 6 weeks after delivery [2].

Copeland and Harbough carried out an analytical study titled “Transition to

maternal competence among married and single mothers in the early period of parental." This was carried out in order to find differences and examine the relation with social factors in attaining maternal competence between the groups of married and single nulliparous women. It can be concluded that there is a significant difference between the mean scores of maternal satisfaction.

This study shows that social factors may have a role in maternal satisfaction [8]. In an analytical-correlational study on the "structural factors of parenting sense of competence", Gilmore and Cuskelly concluded that high score of parenting is a sense of competence that reflects three factors — role of parenting satisfaction, self-efficacy and interest in the parenting role. His study showed that intervention can have an impact on the parenting sense of people who may show disaffection to their children [19]. Formation of the maternal role starts before delivery, and when the baby is born, the mother begins her role [20].

The findings of this study indicate that although the proposed training had no impact on maternal identity, training is important for the mother's satisfaction with regard to the parenting role and the role as a mother.

Some research units in the field of infant care use other sources such as media or publications, which can be considered as an unavoidable limitation; therefore, while designing a personal information questionnaire, researchers tried to study the homogeneity of the two groups in terms of intervening factors.

The results of this study can be profitably used in all health centres and clinics and centres with prenatal care units. Since midwives have a special place in providing prenatal care and play a major role in maternal and child healthcare in all societies, the content of this research can become pregnant mothers' standard protocol in the future.

It can be a basis for future research so that researchers can conduct broader studies in the field of relationship with maternal identity.

Acknowledgments

The research was conducted with approval of the ethics committee of Tehran University of Medical Sciences (282/130/D/92 dated 16.5.2013) respecting ethics in all phases of the study and trusteeship, and with written informed consent of those willing to participate in the research projects.

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