

ORIGINAL ARTICLE

Perceived Social Support and Maternal Competence in Primipara Women during Pregnancy and After Childbirth

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ABSTRACT

Background: Developing maternal competence in first time mothers has a significant impact on neonate's growth psychosocial development and neonates growth and psychological development. Social support can be an important element for becoming a new mother. We aimed to investigate how social support and maternal competence change during pregnancy and 4 months after it and examine the relationships among social support and maternal competence.

Methods: This longitudinal study was conducted on 100 first time mothers attending health centers in Alborz city, Alborz Province, between February 2015 and January 2016. Data were collected through perceived social support questionnaire that consisted of 12 questions and Parenting Sense of Competence Scale consisting of 17 items scored based on Likert's scale. The collected data were analyzed by SPSS software, version 16. Repeated-measure test and Pearson's correlation coefficient were used. $P < 0.05$ was considered significant.

Results: Maternal competence significantly reduced during the study ($P=0.008$), while perceived social support did not show any significant reduction ($P=0.286$). A direct relationship was found between social support and maternal competent six weeks after childbirth ($r=0.19$, $P=0.049$), and also social support and maternal competence sixteen weeks after childbirth ($r=0.23$, $P=0.01$).

Conclusion: Considering the reduction of maternal competency during the study, social support by healthcare providers may be helpful for the mothers' transition to motherhood, and midwives must design specific interventions to promote the sense of maternal competence and perceived social support in first time mothers.

KEYWORDS: Social support, Primipara, Pregnancy, Competence

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INTRODUCTION

Attaining maternal competency and satisfaction from maternal role are the main components required for accepting the maternal role. Such acceptance would in turn have a significant impact on the quality of maternal behavior and infant's mental growth.¹ Maternal competence, similar to the concept of maternal confidence and maternal self-efficacy reflects women's perceptions of their abilities to undertake their maternal role effectively.² Becoming a mother for the first time is a major developmental transition of adulthood and change is an inevitable element of that process. The birth of a baby is not only an important event for couples, but is also a source of concern for the entire family.³ Previous research indicates that social support facilitates the transition to motherhood, social support, including the positive support of family and friends, increases parenting competence by providing encouragement and resources during the period of role-transition.⁴ Social support is like a barrier that protects people against potential effects of stressful life events and enables people to cope with the difficulties in life.⁵ The transition is also influenced by the mothers' own beliefs in their capabilities as new mothers. These factors can influence mothers' maternal mental health and well-being.⁶ According to Bandura's theory, mothers who have more sense of maternal competence, insist more on their maternal role as a mother, do not blame themselves, and have more sense of success.⁷ Development of maternal role is a progressive process that starts from pregnancy and forms 4 to 6 months after the childbirth. In a study, the mothers reported that the formation, acceptance, and satisfaction of maternal role happened at round 4 months after giving birth.⁴ A qualitative study in Australia showed that most of the women lacked self-confidence in the ability to care for their babies.⁸ A review study of 9 related articles concluded that first time mothers had a sense of incompetence in their maternal role.⁹ Social support is a predictor of postpartum depression and maternal role competence.¹⁰ Postpartum

depression is a problem that occurs during the first days of childbirth which affects 10-20% of mothers in all ethnical groups.¹¹ The prevalence of postpartum depression in Iranian mothers during the first 12 weeks of childbirth has been estimated to be 28.7%.¹⁰ Investigating social support and maternal competence changes would yield a better understanding of the mother's adaptation process with the maternal role, and is an effective guide for interventions to help mothers better accept their maternal role.¹² Large populations of Alborz province are young migrants in the reproductive age who leave far away from their families. Therefore, the young mothers in this province need guidance and social support to adapt to their maternal roles. Since no study has been conducted on this subject in the province, we aimed to examine the changes and impact of perceived social support and the sense of maternal competence among first time mothers attending health centers of Alborz, Iran. We hope that this study would be a step towards promoting the health of mothers and infants living in this province.

MATERIALS AND METHODS

The present study was a longitudinal study. Sampling was done from February 2015 to January 2016. The centers for sampling were selected on the basis of the number of attendance record and location. Samples were selected through convenient method and from two health centers in Alborz province that were in the Alborz city and have the largest number of attendees (Fardis' Vali-e Asr health center, and Shahid Torkian health center). Alborz is one of the provinces in the central part of Iran. The province has a population of over 5.2 million.

The inclusion criteria were as follows: being pregnant for the first time (over 28 weeks into pregnancy) with no history of previous pregnancy, being married, being between 18-35 years old, and not being in a high-risk pregnancy. Exclusion criteria were: having mental-psychological disease, having postpartum depression diagnosed by Edinburgh's questionnaire and having

pregnancy complications. The sample size was calculated based a previous study.¹³ Minimum correlation coefficient between social support and maternal competence was 0.3, the samples size with the power of 80% and 95% confidence was calculated to be 85 women using the following formula. It was decided to allocate 100 samples after considering dropout rates.

$$N = \frac{(Z_{1-\alpha/2} + Z_{1-\beta})^2}{\frac{1}{4} \left[\ln \left(\frac{1+r}{1-r} \right) \right]^2} + 3$$

Data collecting tools were three questionnaires. The first questionnaire was about demographic information. The second one was about perceived social support (PSS) which consisted of 12 questions based on Likert's scale from strongly agree to strongly disagree. Reliability and validity of the questionnaire was approved in 1988 by Zimet et al. Perceived social support scale had good to excellent internal consistency with a Cronbach's alpha of 0.81 to 0.98 and test-retest reliability of 0.92 to 0.94.¹⁴ Reliability and validity of the questionnaire was determined in this study after its translation through forward and backward method. Furthermore, its validity was confirmed by content validity conducted by 10 of the University's faculty members in reproductive health (5 experts), nursing (3 experts) and health education (2 experts). The questionnaire's internal consistency was calculated using Cronbach's alpha coefficient to be 0.85. In addition, in order to assess the questionnaire's stability, test-retest reliability was conducted to estimate the intra-class correlation coefficient (ICC). Twenty participants completed the questionnaire twice with two-week intervals. ICC values were calculated 0.96.

Third questionnaire contained the Parenting Sense of Competence Scale (PSOC); The PSOC was developed by Gibaud-Wallston in 1978.¹⁵ The PSOC items were rationally constructed to form two subscales: Value/Comforting and Skills/

Knowledge, this part consisted of 17 items which were based on Likert's scale. Gibaud-Wallston and Wandersman reported internal consistencies of 0.82 for the Value/Comforting scale and 0.70 for the Skills/Knowledge scale, and test-retest reliability coefficients over a 6-week period ranged from 0.46 to 0.82. After forward and backward translation, its content validity was determined by 10 of the University's faculty members in reproductive health (5 experts), nursing (3 experts) and health education (2 experts) and its internal consistency was calculated using Cronbach's alpha coefficient to be 0.78 and the two-week test-retest reliability was 0.92. The questionnaires were completed by self-reporting during pregnancy and at six weeks and sixteen weeks after birth. Initially, the Edinburgh's depression questionnaire was added to the previous questionnaires at six weeks after birth to help detect mothers who had developed postpartum depression so they could be excluded from the study. The Edinburg postnatal depression was developed by Cox et al in 1987.¹⁶

This questionnaire consisted of 10 questions based on a four-point Likert Scale. The score of 13 and above indicated postpartum depression. Montazeri et al validated the Persian version of this questionnaire with a Cronbach's Alpha of 77% and Correlation Coefficient of 80%,¹⁷ which was used in this study.

After obtaining the approval of the University's Vice-Deputy for Research, the researcher frequently attended the selected health centers affiliated to Alborz University of Medical Sciences. The aim and method of study were explained to the potential participants and those who were interested to take part in the study were selected after giving an inform consent. The phone number and home addresses of the selected participants were collected and they were assured about confidentiality of their information. Sampling continued until desired sample size was obtained. Women who agreed to participate in the study were asked to complete the PSSS, PSOC, and

demographic questionnaires. When the participants attended the postnatal clinic at six-week post-partum to visit the health

centers to receive family planning and infant care services, they were asked to complete the PSSS and PSOC again as well as Edinburg

Table 1: Distribution of pregnant women based on their personal and social characteristics (N=100)

Age	N (%)	Mean±SD
15-20	9 (9)	28.8±5.3
21-26	33 (33)	
27-32	37 (37)	
33-38	18 (18)	
39-44	3 (3)	
Husband's age		
15-20	0	31.7±5.4
21-26	18 (18)	
27-32	40 (40)	
33-38	31 (31)	
39-44	8 (8)	
Missing data	3 (3)	
Education		
Primary	5 (5)	
High school	23 (23)	
Diploma	43 (43)	
University	26 (26)	
MS and higher	3 (3)	
Husband's Education		
Primary	9 (9)	
High school	21 (21)	
Diploma	35 (35)	
University	31 (31)	
MS and higher	4 (4)	
Job		
House keeper	74 (74)	
Employed	21 (21)	
Self-Employed	5 (5)	
Worker	0 (0)	
Husband's Job		
Un employed	5 (5)	
Worker	8 (8)	
Employed	31 (31)	
Self-Employed	56 (56)	
Economic status		
Poor	5 (5)	
Average	64 (64)	
Good	29 (29)	
Excellent	2 (2)	
Delivery type		
Natural vaginal delivery	64 (64)	
Section	36 (36)	
Babies sex		
Boy	52 (52)	
Girl	48 (48)	
Supporter		
Yes	86 (86)	
No	14 (14)	

questionnaire. In these period mothers who had Edinburg score of over 13 were excluded from study. Once again, 16 weeks after birth, PSSS and PSOC questionnaires were completed by the participants when attending the health centers. The collected data were analyzed by SPSS software, version 16, using descriptive and inferential statistics, and after determining the frequency and mean (by descriptive statistics), changes of maternal competence and social support were determined by repeated measures. Furthermore, using Pearson’s correlation coefficient, the relationship between maternal competence and social support was also determined. The level of significance was set at 0.05.

The present study was carried out with the permission of Vice chancellor for Research of Alborz University of Medical Sciences and after obtaining ethical approval (code: Abzums.rec1393.39) from Research Ethics Committee of this university. All the participants signed informed consent and were assured about the confidentiality of all their personal information. The researchers tried to observe all the participants’ rights.

RESULTS

Socio-demographic characteristics are outlined in Table 1.

Result of repeated measures test showed the effect of time on maternal competence, in a way that, scores of maternal competency during pregnancy until sixteen weeks after childbirth showed a reduction ($P=0.008$), and there was no difference between the scores of maternal competence at 6 and 16 weeks after childbirth. We also found that social support did not differ significantly during pregnancy up to sixteen weeks after childbirth ($P=0.286$, Table 2).

In total, 30% of the women referred to their mother as their main support, 26% of them said their spouses were supporting them, 8% said their mothers and spouses supported them, and 14% stated that they had received no support.

The results showed a significant direct relationship between social support and maternal competent six weeks after childbirth ($P=0.049$). We also found a significant direct relationship between social support and maternal competence sixteen weeks after

Table 2: Results of repeated measures in measuring three times of maternal competence and social support scores

Scores	Time	During pregnancy	Six weeks after pregnancy	Sixteen weeks after pregnancy	Repeated measure test
		(Mean±SD) (Minimum & maximums)	(Mean±SD) (Minimum & maximums)	(Mean±SD) (Minimum & maximums)	
Maternal competence		61.62±9.21 (32-82)	58.92±5.71 (46-79)	58.72±6.32 (44-85)	P=0.008
Social support		52.81±1.02 (24-72)	54.04±9.05 (15-72)	54.81±8.43 (28-72)	P=0.286

Table 3: Correlation coefficient of perceived social support and maternal competence in first time mothers during pregnancy, six and sixteen weeks after child birth

Maternal competence	Social support		
	During pregnancy	Six weeks after child birth	Sixteen weeks after child birth
During pregnancy	P=0.70 r=-0.03	P=0.59 r=-0.05	P=0.69 r=-0.04
6 weeks after child birth	P=0.15 r=-0.14	P=0.049 r=0.19	P=0.47 r=-0.07
16 weeks after child birth	P=0.37 r=0.09	P=0.04 r=0.20	P=0.01 r=0.23

childbirth ($P=0.01$, Table 3).

DISCUSSION

Results of the present study showed that maternal competence reduced during time. In a prospective study conducted in USA on couples who had become parents for the first time, the mothers had reported a gradual increase in maternal competency in the first three month postpartum.⁴ A study showed that maternal competence increases in the last three months of the pregnancy up to four months after childbirth.¹⁸ Furthermore, another study that was conducted in the UK concluded that, maternal competency increased during pregnancy up to three months after childbirth.¹⁹ Result of a study on women with their first pregnancy showed that, maternal competence at the last three months of pregnancy and the first month after childbirth was the same, but significantly increased four months after childbirth.²⁰ These results are inconsistent with the findings of our study.

A study showed that maternal competence reduced during pregnancy up to six weeks after childbirth and then increased until three months after childbirth.¹³ Another study on Chinese mothers showed that maternal competence reduced during pregnancy up to six weeks after childbirth.¹² A study in Australia also showed that self-confidence of mothers in undertaking maternal duties reduced after childbirth.⁸ These results are consistent with the finding of the present study.

In this study, high maternal competence score during pregnancy compared with after childbirth can indicate that facing childrearing issues is more difficult for mothers than what they had previously thought, and this is due to the lack of experience and information. This fact is also associated with the changes that happen in mothers in the first week of becoming a mother. Therefore, preparing mothers for their motherhood role requires education.

We found that the score of social support during pregnancy up to sixteen weeks after childbirth did not show a significant difference.

Most women referred to their mothers as their main supporting person. A study on Iranian women showed that the mean score of perceived social support was higher than the present study. Three sources for social support in the mentioned study were spouse, family, and friends.²¹ Since Alborz province has a large population of migrants in the reproductive age and women spend most of their time away from their family, the lack of difference between social support scores could be related to being away from the family. In recent years, the effect of social support on different aspects of health such as pregnancy and postpartum has been proven.²² Another study on Iranian women showed that the level of perceived social support was relatively high in mothers and there was a relationship between social support and maternal competence. They also indicated that the score of support by the spouse was the highest.²³ In another study on Iranian women, most women referred to their husbands as the main source of support.²⁴ Result of a study in China showed that the score of social support during pregnancy was higher than at one and three months after childbirth, whereas, the score of social support did not differ at one and three month after childbirth.¹³ In another study, perceived social support gradually reduced during pregnancy up to six weeks after childbirth.²⁵ With the changes happening in today's world, new challenges and demands have been created for women in the childbearing age. Foundation of society and social support are important for these mothers especially during pregnancy, when mothers may experience high level of stress.²⁶ For these mothers, social support acts as a strong barrier against challenges that they face during pregnancy and after childbirth. Social support helps mothers obtain and discover their personal maternal abilities and adopt better to the situation and have reduced stress.²⁷

Results of this study demonstrated that, there was a significant relationship between social support during pregnancy and maternal competence six weeks after childbirth. There was also a significant

relationship between social support six and sixteen weeks after childbirth and maternal competence six and sixteen weeks after childbirth. A study in China also showed a significant and positive relationship between social support every three months and maternal competence.¹³ Another study showed that self-esteem of the mothers was the major consistent predictor of perceived maternal role competence.²⁸

These results support the theoretical framework. According to Bandura, the mothers who perceived higher level of social support from the family might receive more instructional support and verbal encouragement which served to enhanced their parenting competency.

Having a better feeling and obtaining competence and satisfaction from maternal role are inseparable factors that affect acceptance of the maternal role during transition into motherhood. A positive transition period is considered as an effective factor on maternal competence and social-psychological development of children.²⁹

This study showed the effect of social support on maternal competence. Among the strengths of this study was its method, which due to its prospective nature, clearly showed changes and relationships between social support and maternal competence.

The limitation of the study was the small sample size. The generalization of this study may be limited because the sample composed solely of Iranian pregnant women with a single, normal pregnancy without a past psychiatry history.

CONCLUSION

This study showed the effect of social support on maternal competence, and indicated that, although there was relationship between social support and maternal competence, the maternal competence score reduced after childbirth. This reduction reflects unrealistic expectations of first time mothers from their maternal capabilities and their lack of readiness to become a mother.

Assessment of social support and maternal competence should start during pregnancy and continue until childbirth. Result of this study strengthens the role of holistic midwifery in maternal competence. Midwives should educate mothers and their spouses on childrearing and its associated issues and problems, and introduce themselves as a source of social support to mothers. This study was conducted on first time mothers without any pregnancy complication or physical disease. Therefore, it is suggested that, further study should be conducted on women with the above conditions.

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Conflict of Interest: None declared.

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