

## Effect of an Accompanying Midwife on Maternal Resilience and Preferred Route of Delivery in Pregnant Women

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### ABSTRACT

**Background and objectives:** Pregnancy is one of the most important and stressful periods of women's lives. Recent studies have indicated an increasing trend in caesarean section rates. Although women are becoming more impatient and less resilient about vaginal delivery, raising awareness on stress management and resilience increases women's readiness for the important task of motherhood. The purpose of this study was to investigate effect of an accompanying midwife on maternal resilience and preferred method of delivery in pregnant women.

**Methods:** This cross-sectional, descriptive-analytical study was performed on pregnant women who were in the final month of pregnancy and referred to the Khatam-al-Anbia and Baghiyyatollah al-Azam hospitals in Tehran (Iran) for periodic examinations in 2018. Overall, 150 pregnant women (75 with an accompanying midwife and 75 without an accompanying midwife) were selected using simple random sampling. The Connor-Davidson Resilience Scale was used to assess maternal resilience. In addition, the delivery preference (natural childbirth or cesarean section) was determined in the scale. Data were analyzed in SPSS 16 using descriptive statistics and inferential statistics at significance level of 0.05.

**Results:** Pregnant women with an accompanying midwife had a significantly higher mean resilience score than those without an accompanying midwife ( $P=0.002$ ). Moreover, the resilience score had a significant impact on subjects' preferred route of delivery ( $P < 0.01$ ).

**Conclusion:** The findings of this study show that pregnant women accompanied by a midwife during pregnancy have better resilience and tendency towards vaginal delivery.

**Keywords:** Resilience; accompanying midwife; vaginal delivery; caesarean section

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## INTRODUCTION

Preventing maternal and perinatal mortality, which occur mostly during and immediately after delivery, is one of the fundamentals of social justice (1). Pregnancy and childbirth are life-changing and evolutionary events that can be stressful for women and their families (2). Maternal factors during pregnancy, such as working, resting and nutrition as well as communication and stress-coping abilities form part of the mother's lifestyle during pregnancy (3, 4). Although childbirth is a normal physiologic process, it can be associated with severe pain, uncertainty and failure, resulting in a sense of loneliness and vulnerability (5). Studies show that stress during pregnancy is associated with preterm birth, low birth weight, hypertension, toxemia, depression and childhood allergic diseases (6). One way to deal with these stresses is resilience, a normal concept and construct of interest in positive psychology that refers to successful adaptation despite challenges and threats (7). In addition, resilience is the ability to overcome adversity, trauma, tragedy, threats or significant stressful events (8, 9). Resilient individuals have strong personalities and mental and physical health compared to those who are intolerant and impatient when facing stressful events (9, 10). Fear of vaginal delivery is a common problem among pregnant women that often leads to request for cesarean section. It is estimated that about 5-20% of pregnant women fear childbirth (11) while 9-13% of them experience debilitating and extreme fear, which is associated with an increased rate of cesarean section (12, 13). Fear of childbirth leads to anxiety and will have a negative impact on maternal and neonatal outcomes (14). In this regard, the World Health Organization has addressed the importance of maternal support for reducing fear and stress of mothers during labor and delivery (15). Continuous midwifery support includes emotional support (continuous presence, reassurance and encouragement), physical support (decreased thirst, hunger and pain), providing an insight into the process of childbirth and its management, respecting the

mother in the decision making process and helping mothers establish communication with other caregivers (16).

Numerous studies have also demonstrated the positive effect of having a midwife during labor and delivery (17-21). According to previous studies, a cascade of chemical substances is produced in response to stress during labor, which calms the mother and forms her future behavior towards her child and other women (22, 23). In addition, a study reported that midwives' continuous support during delivery reduces length of delivery, amount of stress, the need for oxytocin administration and increases childbirth satisfaction (28).

Given the importance of communication between midwives and pregnant women, the aim of this study was to investigate effects of accompanying midwives on maternal resilience and preferred method of delivery.

## MATERIALS AND METHODS

This applied descriptive-analytical study was carried out in 2018 on pregnant women who were in the final month of pregnancy and referred to the Khatam-al-Anbia and Baghiyyatollah al-Azam hospitals in Tehran (Iran) for periodic examinations. Overall, 150 pregnant women (75 with an accompanying midwife and 75 without an accompanying midwife) were selected using simple random sampling. Exclusion criteria included a previous history of postpartum depression, inherited blood and genetic disorders and participation in another support program. The Connor-Davidson Resilience Scale (2003) was used to assess resilience (1). The questionnaire consists of 25 items that are scored on a five point Likert scale ranging from 0-4: not true at all (0), rarely true (1), sometimes true (2), often true (3), and almost always true (4). According to results of factor analysis, the scale describes the notion of personal competence, trust in personal instincts, tolerance of negative emotions, positive acceptance of change, secure relationships, control and spiritual influences.

The cut-off point for this scale is a score of 75, i.e. scores above 75 indicate high resilience and scores below 75 indicate low resilience. In addition, the delivery preference (natural or cesarean section) was determined in the scale.

Data were analyzed in SPSS 16 using descriptive statistics and inferential statistics at significance level of 0.05.

**RESULTS**

Table 1 shows the frequency distribution of subjects based on age, length of marriage, gravidity and method of delivery.

**Table 1. Frequency distribution of subjects based on gravidity, length of marriage, age and method of delivery**

Group	Mean (± SD) age	Mean (± SD) length of marriage	Gravida 1	Gravida 2	Gravida 3	Vaginal delivery	Caesarean section
With accompanying midwife (n=75)	28.67(3.895) years	6.0 (3.259) years	35 (46.7%)	30 (40%)	10 (13.3%)	52 (69.3%)	23 (30.7%)
Without accompanying midwife (n=75)	27.96(3.978) years	6.36 (3.364) years	33 (44%)	31 (41.3%)	11 (14.7%)	18 (24%)	57 (76%)

SD: standard deviation

Table 2 summarizes the mean score of each group of subjects in components of resilience.

**Table 2. Comparison of mean scores of resiliency components between the two study groups**

Dependent variable	Without accompanying midwife		With accompanying midwife		Total of Squares	F	P-value
	Mean	Standard deviation	Mean	Standard deviation			
Notion of personal competence	4.2	39.38	2.3	32.28	612.113	9.698	0.002
Tolerance of negative emotions	3.2	28.45	3.4	24.35	891.988	14.977	0.001
Positive acceptance of change and secure relationships	2.6	17.29	2.5	18.25	18.343	1.156	0.284
Control	2.6	20.02	3.4	21.88	19.165	1.696	0.195
Spiritual influences	3.1	20.24	2.9	19.89	0.882	0.322	0.631

After verifying the equality of variance using Levene's test, independent t-test was used to compare the mean resilience score between the two groups. Based on the results, the

mean resilience score in women with an accompanying midwife (69.33±15.15) was significantly higher than in those without an

accompanying midwife (61.71±13.89) (P=0.002).

As shown in table 3, more than 90% of pregnant women with a low resilience score

preferred caesarean section, while more than 50% of pregnant women with a high resilience score preferred vaginal delivery.

**Table 3. Comparison of delivery preference between women with and without an accompanying midwife based on the resilience score**

Variable		Type of delivery		Total	$\chi^2$	Significant
		Vaginal delivery	Cesarean section			
Resilience in women without accompanying midwife	Low	4 (8.3%)	44 (91.7%)	48 (100%)	17.942	0.001
	High	14 (51.9%)	13 (48.1%)	27 (100%)		
	Total	18 (24%)	75 (76%)	75 (100%)		
Resilience in women with accompanying midwife	Low	6 (20.7%)	23 (79.3%)	29 (100%)	52.619	0.001
	High	64 (100%)	0	46 (100%)		
	Total	3 (69.3%)	23 (30.7%)	75 (100%)		

## DISCUSSION

Based on our results, maternal resilience differed significantly between pregnant women with and without an accompanying midwife. In this regard, Lee (2015) stated that trusting midwives allows pregnant women to overcome childbirth-associated worries, sorrows and pain (29). Our findings are in line with findings of two previous studies (30, 31). An accompanying midwife acts as an important and reliable source of support in stressful situations, which can increase the resilience of pregnant women. A midwife's contemplation and attention to duties can also reflect on pregnant women who are impatient and not resilient, which further clarifies the benefits of an accompanying midwife (32-34). Our results also showed that having an accompanying midwife could influence delivery preference in pregnant women. This finding is consistent with findings of studies by Khodabakhshi Koolae et al. (6) and

Ahmadi et al. (35). Aktaş et al. (2016) reported that programs such as midwife-mother empathy training, can lead to long-

term behavioral changes and improve midwives' empathy skills, thus promoting vaginal birth as well as maternal and neonatal health (36). Furthermore, highly resilient people can seek help depending on the situation, and naturally, after receiving appropriate responses, they can reach a more suitable decision. In fact, pregnant women without an accompanying midwife are less resilient and aware of their situation and therefore have an increased tendency towards caesarean section.

In future studies, it is suggested to assess the impact of other variables such as education level, socioeconomic status, marital satisfaction and stress coping styles on resilience and delivery preference in pregnant women.

## CONCLUSION

The findings of this study show that pregnant women accompanied by a midwife during pregnancy have better resilience and tendency towards vaginal delivery.

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## DECLARATIONS

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Not applicable.

### *Ethics approvals and consent to participate*

The study has been approved by the ethics committee of the Islamic Azad University, North Tehran Branch, Tehran, Iran (approval code: 950296002).

### *Conflict of interest*

The authors declare that there is no conflict of interest regarding the publication of this article.

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