

## Effect of the one to one Midwifery Care During Labor on Modes of Delivery and Duration of Labor and Increase Satisfaction with Childbirth

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Anxiety and fear of childbirth lack of progression and increased risk of caesarean section. to comply with this fear women are in need of protection. we support the mother can reduce her anxiety and helped him better match labor. this study aims to determine the effectiveness of the one to one midwifery care during labor on modes of delivery and duration of labor and decrease satisfaction with childbirth compared to usual care will be carried out. This study is a clinical trial .during which 200 pregnant women undergoing vaginal birth, hafez hospital, shiraz university of medical sciences in spring 1393 were enrolled and randomly assigned to intervention and control groups. in the intervention group, with the beginning of the active phase of labor, a midwife, while at the bedside continuously decrease, his use of non pharmacologic methods of pain and physical and emotional support to deal with the pain and stress of labor helped. control samples as routine training centers - were care. birth outcomes (including type and duration of labor, ...) was recorded. data by spss 21 software using inferential statistics, including t tests were analyzed. The study findings showed that significant decline in caesarean section and use of instrumental vaginal delivery ( $p=0.05$ ) he average degree of maternal satisfaction with care delivery in the intervention group after mama 5.84 in the control group 2.36 that this difference was statistically significant ( $p<0.05$ ). According to the study results, one to one midwifery care as responding knowledgeably and sensitively to the individual needs of laboring women would eventually decrease surgical interventions, complications and medical costs. the researchers suggest that, this method can be used by midwives in obstetric centers. therefore, providing of the one to one midwifery care in the delivery and labor rooms of birth centres is recommended

**Key words:** Midwifery Care, type of delivery, duration of labor, maternal satisfaction with childbirth, nonpharmacologic methods of pain.

Labor is painful and onerous<sup>1</sup> therefore, a pregnant woman needs help and support others. Among health care providers, midwives have a special role in this field. She is the only person who is expert in this field. Quality of obstetric care has the greatest impact on the outcome of labor mama's actions in this critical stage of life a woman can have different results, not only the mental and

emotional health of mothers, but also, newborns has considerable influence

Fear and anxiety causes muscle contraction, increasing pain, slowing of fetal heart rate, prolonged second stage of labor , failure to progress in labor naturally, increased risk of cesarean.

To comply with this fear women are in need of protection. Continuous care of a midwife at her bedside main part of a woman's emotional support<sup>3</sup>.

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Special care, midwife helps with the constant presence of her mother's bedside.

Mother to face with the pain and stress of labor. With the use of nonpharmacologic pain (breathing techniques, relaxation, massage, etc.), and physical and emotional support to help him<sup>7</sup>. Several studies show that high quality midwifery care significantly reduces the complications of labor and delivery room. High quality midwifery care during labor and delivery room can reduce the amount of medication needed to relieve pain and irritation in the room rate, episiotomy, perineal tear, the use of vacuum and forceps and cesarean delivery, fetal death, low apgar infant and maternal and neonatal infections.

Because women during labor is anxious and excited, expecting a skilled person, with compassion, gentleness and respect, care and support of his. because assure the mother, one of the most effective measures that can be performed during labor. This is not just an emotional support for her to be happier and more relaxed, but also a significant positive impact on the physiology and perinatal outcomes<sup>13</sup>.

The continued presence of the midwife, the woman's bedside, in all phases of labor and support him, by the increased secretion of endogenous analgesics or inhibit the secretion of endorphins and catecholamines, resulting facilitate childbirth is a natural process. The midwife special care of the mother during labor be reduces the length of labor, cesarean section<sup>15</sup> women positive intervention in during labor, increased feelings of safety and security and the mother's self-esteem<sup>16</sup> and be reduce the number of cesarean delivery.

Due to the high cesarean rate in our country, dedicated care of midwives and the positive impact it will have on birth outcomes. This study aims to determine the effectiveness of the one to one midwifery care during labor on modes of delivery and duration of labor and decrease satisfaction with childbirth compared to usual care will be carried out.

## METHOD

This study was a randomized control group. After obtaining permission from the research ethics committee of shiraz university of medical sciences, the first stage of labor in

nulliparous women in maternity wards, hafez hospital, shiraz was conducted in spring 2014. The target population for this study included:

All pregnant women with low risk

- a) 18 to 35 years -
- b) gestational age of 42-38 weeks
- c) with singleton fetuses who had been hospitalized for pregnancy and the doctor - had a natural labor.
- d) samples were removed include any known standard of physical and mental illness and high risk pregnancies and the lack of cooperation was studied.-

Mothers, using a random number table to block the way, were the two groups (holly quran) Initially, the researcher would make different permutations a (indicating the case) and b (indicating control) that was six different modes, then randomly selected using a table of random numbers 15 times in a row is a permutation .

People, if you wish to participate in the study, the cervix is dilated 3-4 cm, were randomly divided into intervention and control groups (100 patients in each group) were placed in separate rooms labour (1 to 2 beds) division of labor. That is, using a random number table, the block method, were in both intervention and control groups (with midwife care).

### Research midwife jobs in the intervention group (special care)

Bedside of her mother and continuing care nursing, assessing progress of labor, health status of the mother and fetus, continuous intravenous infusion of oxytocin, controlled cuts, working closely with physician assistants on duty , maintain the delivery and avoid unnecessary interventions by providing: emotional support , observe the physical comfor and provide information to women to overcome fears, reduce pain and enhance the tranquility and comfort he has worked through the following:

### Emotional support actions such as

- a) Establish a relationship of trust space and trusted by dealing sincerely and respectfully,
- b) Assist with understanding and warm and comforting behavior.
- c) Make sure the mother of his constant presence and announced plans to contribute to the delivery smoothly, safely

- and with minimal pain is.
- d) Touch and hold hands, stroking the forehead and create a sense of calm, approval and encouragement.
  - e) Boost morale, encourage, appreciate.
  - f) Understanding the needs, desires and concerns of women and trying to resolve them, the company of women in order to divert attention from pain, confidence, trust and co.
  - g) To satisfy the careful and respect the privacy of the mother during routine obstetric examinations.

**Informing and raising awareness of women by**

- a) Presentation simple and understandable language about the physiology and development of the various stages of labor to reduce maternal anxiety and fear.
- b) Continued emphasis on natural childbirth process and behavior in a way that would confirm it.
- c) Informing women of what is happening and explain the common practice of midwifery.
- d) Explain that natural childbirth is painful.

But there are ways in which women can learn and practice to reduce the pain and instead of fear and anxiety reactions, nervousness and restlessness save your energy and help facilitate labor.

- a) Combined with relaxation training and his illustration and encourage them in the intervals between contractions (stress on the muscles of the perineum and pelvic floor relaxation).
- b) Training and focus on breathing control techniques, establishing eye contact at the beginning of each contraction, exercise techniques and encourages women to emulate its performance during uterine contractions.

**Compliance with measures to reduce the physical comfort of his physical discomfort (pain, hunger and thirst) helps such as:**

- a) Use of massage, heat and cold compresses or topical (the tendency to decrease).
- b) Attention and help to maintain the health, cleanliness and comfort, and encourage women to be emptying your bladder frequently.
- c) Give cool fluids and sugar levels when administered weakness and hunger (in coordination with the doctor).

- d) Support and encourage women to have the first stage of labor mobility and frequent switching of vertical modes (walking, standing, leaning on the edge of the bed, sitting, etc.) With intravenous infusion.
- e) In the second stage of labor, the recommendations to the state semi-sitting position, squatting and kneeling on the edge of the bed and assist the mother in maintaining these conditions.

In the second stage of labor, the uninterrupted, private midwives, continued clinical care and provide emotional and physical support, been taught how to breathe correctly and pressure while trying to leave the baby and also communicate and work closely with delivery agents, assistants and interns who are often women in both groups were found.

Control group, according to the usual training centers - medical assistants and interns, women were jointly care. Careful person, the various intervals, been replaced, as well as samples often bed rest, restricted, and no association and nonpharmacologic methods of labor was not used.

**Midwives in the maternity ward at the time was engaged in research following tasks**

Monitoring vital signs, chart records, contact the serum, preparing and sending women into the operation room, completed papers identify the baby and other routine measures

In this study, both intervention and control groups, the medicines for pain relief were not used in cases of prom was, in the absence of proper development stages of labor, the doctor or an assistant women, artificial, was torn.

To determine sample size, we performed a pilot study in 30 patients. Based on the results obtained, 95%, and 80% test, a minimum sample of participants in each group, 100 patients were identified. Thus selected, 100 patients in each group (intervention and control), a random sample of nulliparous women candidates for vaginal birth, hafez hospital, shiraz university of medical sciences, which in 2014 had all the characteristics in the study

Maternal characteristics and obstetric outcomes in both groups were arranged in a checklist, which was recorded and collected.

This checklist consists of three parts: first, demographic data.

Second, progress of labor (the time of examination, the cervix changes in time to get home (sort of) and oxytocin) and third sector delivery outcomes (including type of delivery, duration of labor, the degree perineal laceration, rupture of the water bag, notes the main reasons for cesarean delivery), respectively.

Check for validity, content validity and reliability, with cronbach's alpha coefficient was determined.

Results using software spss21, were analyzed. Frequency, percentage, mean and standard deviation were used to describe variables for their analysis, the statistical tests: chi-square test, paired t test, fisher exact test, chi-square tests were used.

The mantel mantel test, verify and control the effects of confounding variables (prom mode) on the mode of delivery.ed.

## RESULTS

The study was conducted during 4 months. A total of 200 eligible women participated in the study. In both groups, pregnant women, according to age, gestational age, fetal gender, height, education level, occupation, birth weight, the difference was not statistically significant ( $p>0.05$ ) (table 1).

The findings in the two groups in terms of delivery, showed that private obstetric care, cesarean delivery declined compared with the usual care group. (table 2)

**Table 1.** The frequency of certain demographic groups of women in usual Midwifery care and One To One Midwifery Care

Index	usual Midwifery care S d± mean	One To One Midwifery Care Sd± mean	Result Test
Age of mother (years)	3.80± 24.62	4.01± 24.80	p=0.65 T-Test
Gestational age(Week)	0.6± 36.60	0.80± 38.86	p=0.82 T-Test
Stature of mother (Cm)	19.2± 164.42	141.71± 183.06	p=0.43 T-Test
Weight of mother (Kg)	10.30± 72.60	10.80± 72.20	p=0.72 T-Test
Weight of Baby (g)	273.27± 3317.30	334.40± 3206.20	p=0.71 T-Test
	Number (%Percent)	Number (%Percent)	
Baby sexuality	Boy (49%) Girl (51%)	51(51%) 49(49%)	p=0.16 Exact fisher
Housewife	(94%)	7878% )	p=0.35
Practitioner	(6%)	22(22%)	Chi-square test
Secondary education	(38%)	36(36%)	p=0.86
Education Diploma and Degree	(56%)	44(44%)	Chi-square test
Bachelor degree or higher	(6%)	20(20%)	

**Table 2.** Comparison type of delivery in two groups of women in usual Midwifery care and One To One Midwifery Care

Group Type of delivery	usual Midwifery care Number (%Percent)	One To One Midwifery Care Number (%Percent)
Natural delivery	(52%)52	(76%)76
Caesarean section (UNnatural delivery)	(48%)48	(24%)24
Total	(100%)100	(100%)100

\*In this study, there was no delivery with tool

**Table 3.** Frequently distribution of type of delivery based on intervening variables “How to the prom” in two groups of women in usual Midwifery care and One To One Midwifery Care

Group type of delivery	Usual Midwifery care		One To One Midwifery Care	
	UNnatural delivery	Natural delivery	UNnatural delivery	Natural delivery
How to the prom	Number (%Percent)	Number (%Percent)	Number (%Percent)	Number (%Percent)
Artificial	20 (46/38%)	32 (53/61%)	12 (22/22%)	42 (77/77%)
Spontaneously	28 (33/58%)	20 (66/41%)	12 (08/26)	34 (91/73%)

**Table 4.** Comparison of during labor in two groups of women in usual Midwifery care and One To One Midwifery Care

Group type of delivery	Usual Midwifery care Sd± mean	One to One Midwifery Care S d± mean
The progress of labor (Duration of labor)	1.51 ± 5.47	1.18 ± 4.56

**Table 5.** Compare the mother's degree of satisfaction From Delivery in two groups of women in usual Midwifery care and One To One Midwifery Care

Group type of delivery	Usual Midwifery care Sd± mean	One to One Midwifery Care S d± mean
mother's degree of satisfaction From Delivery (6 = very satisfied, 1 = very dissatisfied)	0.66 ± 2.36	1.39 ± 5.84

P=0.049

Chi-square test showed that significant differences in the type of delivery between the two groups was found (p>0.05)

In order to check the effect of confounding variables (to prom), the method of delivery, mantel mantel test was performed.

The results showed that, by eliminating the effect of these variables intervening between the two groups in terms of delivery, there was no significant difference. (table 3) in other words, in both cases (spontaneous or artificial rupture of membranes (prom)), abnormal delivery, the intervention group was much lower than the control group.

In this study, three of the main factors for cesarean delivery were as follows:

the lack of progress in labor, meconium and decreased fetal heart. Due to failure of progression in 6 patients, 2 patients with meconium and fetal heart drop 16 people in the intervention group were delivered by cesarean section.

While 8 patients due to failure of progression, 2 due to meconium and heart failure

after 38 fetuses in the control group underwent cesarean section. The results obtained in advance of delivery, duration of labor in the two groups showed significant differences between the two groups (p=0.006) (table 4)

Also, based on the test results, at the end of labor, no significant differences between intervention and control groups in terms of mean birth mother’s consent, was observed. (p<0.05) (table 5)

## DISCUSSION

According to this study, midwifery care (to the accompaniment of the ongoing clinical care) had a favorable impact on reducing cesarean .In other words, the findings of the present study confirms that care private midwife, has a positive effect on reducing surgical interventions.

Brooks (1999) argues that medical care, does not take place obstetrical care, but complements it. Special care practices, midwife helps women to cope with the stress and painful

uterine contractions rather than reaction associated with anxiety, nervousness and restlessness is also a reaction with awareness, calm. It seems that these measures will enhance the natural process of childbirth<sup>7</sup>.

However, the control group, there were no specific guidelines for the protection of the woman in labor, women often faced with labor pain, fear, anxiety, muscle cramps, restlessness and loss of control, showed a reaction. This can affect the progress of labor and fetal health.

Rolli study showed that induction of labor, epidural anesthesia and any kind of analgesia, episiotomy, perineal and vaginal lacerations, neonatal resuscitation and pharmacologic interventions during labor continuing care group, significantly lower than the control group<sup>19</sup>.

The findings showed that the intervention group, the number of cesarean birth causes less done. In this study, the specific care of a midwife, labor time is reduced. The results of this research petrie and walsh<sup>20</sup>, R. P., *et al.*,<sup>21</sup> and sehhati and colleagues<sup>22</sup> is consistent.

Petri read and walsh (2001) showed that, with the continuous support during labor reduces the length of labor, cesarean section, and apgar score is increased.

Studies R. P., *et al.*, (2011) suggest that with the support chosen by the mother (friend or relative) can reduce the duration of the active phase of labor<sup>21</sup> and sehhati findings in 1388, shows the three stages of labor, the parturient receiving ongoing care, and the group receiving conventional care, so there is a statistically significant difference in the duration of labor, the intervention group, shorter than the control group<sup>22</sup>.

In the present study, the degree of satisfaction of private maternity care, compared with the control group was much higher.

According to the study, henderson and mcdonald (2002), provide adequate obstetric care by midwives, promotion of physical and mental health, increasing positive experiences during labor and maternal satisfaction as well, which will enhance her body's ability to analgesia produced or endogenous endorphins<sup>23</sup>.

not receiving adequate care, in addition to the adverse physical and mental effects but also lead to maternal causes dissatisfaction<sup>24</sup> of women discontented midwifery care, broadly, in recent

years, it has been reported<sup>23</sup>

Despite the fact that, in 1384, granted farahani, in their study, the use of modern techniques and supportive care, midwifery and emotional needs of each woman's individual medical centers had recommended to the delivery of the interventions caesarean section and the tool is reduced but still in treatment centers, we see conventional obstetric care more than we are already.

Given the ongoing obstetric care, maternal and fetal monitoring, compared with when the midwife takes care of two or more persons with care and greater coordination is done, for this purpose, are essential it adjustments and pushing the profession of midwifery duties, filling in various forms into clinical practice to provide specialized care

## CONCLUSIONS

The findings confirmed that provide private care, obstetrics, (meaning ongoing care and support, fix appropriate physical and emotional needs of women) during labor, causing a decrease in surgical interventions in childbirth and reduce labor time and increased maternal satisfaction with childbirth it is recommended that new methods of care in birth centers may be used.

## REFERENCES

1. Cunningham F.G, Gant NF, Leveno KJ, Glistrap LC, Hauth JC, Wenstrom K., [Williams Obstetrics]. 22 nd ed. (Gazijahani B Trans). Tabriz, Golban medical publisher 2005, 6,363,426,544. (Persian)
2. Bryanton G, Fraser H & Sullivan P. Woman's perceptions of nursing support during labor. *GOGAN* 1994; **23**(8): 638-44
3. Page I.A, Percival P, Kitzinger SH. The new midwifery science and sensitivity in practice, 1st ed. Churchill Livingstone 2007, 125.
4. Cheung N.F. Pain in normal labor. *Midwives* 1994, **107**(277): 212-6.
5. Bolgy J.I. Stress and delivery. *Ann Med* 1997, **23**(50): 223- 37
6. Rostampey Z, Khakbazan Z, Golestan B. Effect of the presence of trained During the active phase of labor in low-risk pregnant women. *Journal of Guilan University of Medical Sciences*, 2013 :**19**(75) : 79-85

7. Moslem Abadi Farahani SH, Malekzadegan A, Mohamadi R, Husseini F. Effect Of The One To One Midwifery Care During Labor On Modes Of Delivery. *Iranian Journal of Nursing* 2005; **18**( 43).
8. Patricia R. Supporting women in labor: Analysis of different types of care givers. *Journal of Midwifery & Women's Health* 2004; **49**(1): 24-31.
9. Paula M . Doulas as childbirth paraprofessionals: Results from a national survey. *Women's Health Issues* 2005; **15**(3): 109-116.
10. Scott KD et al . A comparison of intermittent and continuous support during Labor: A meta analysis. *American Journal of Obstetrics and Gynecology* 2007; **8**(17): 16-19.
11. Hodnett ED . Pain and women's satisfaction with the experience of childbirth: a systematic review. *American Journal of Obstetrics and Gynecology* 2002; **186**(5) 160-172.
12. Bennet VR & Brown K, editors. Myles text book for midwives. London: Churchil Livingstone; 1999.
13. Page LA. Keeping birth normal. In Page LA, editor. *The New midwifery: science and sensitivity in practice*. London: Churchul Livingstone; 2007.
14. Grabowska C. Alternative therapies for pain relief. In: Page L, & Yerby M, editors. *Pain in child bearing: Key issue in management of pain*. London: Bailliere Tindall; 2007
15. Petree B, Walsh L.V . Maintenance of comfort and management of pain. In: *Midwifery community – based care during the child birth bearing year, 1 st ed.* WB Saunders Company, Philadelphia 2001, 243.
16. Hodnett ED. Caregiver support for women during childbirth. *Cochrane Library of Systematic Reviews Election Edition*. Issue 1999; **17** (2).
17. Badakhsh, MH, Seifoddin, M, Khodakarami, N, Gholami R ,Moghimi S. Rise in cesarean section rate over a 30-year period in a public hospital in tehran, iran. *Archives of Iranian medicine* 2012;**15**:4-7
18. Rooks PJ. The Midwifery model of care. *J Nurs-Mid* 1999; **44**(4): 370-374
19. Rowley M, Hensley M, Brinstead M, Wlodarczyk K., Continuity of care by a midwife team versus routine care during pregnancy and birth: a randomized trial. *Medical journal of Australia*, 1995; **163**: 289-930
20. Petree B, Walsh L.V. Maintenance of comfort and management of pain. In: *Midwifery community – based care during the child birth bearing year, 1 st ed.* WB Saunders Company, Philadelphia 2001, 243.
21. Rostampey Z, Khakbazan Z, Golestan B. Effect of the presence of trained During the active phase of labor in low-risk pregnant women. *Journal of Guilan University of Medical Sciences*, 2013; **19**(75) : 79-85
22. Sehhati F, Najarzadeh M, Rasoli E, Zamanzadeh V. Effect of continuous midwifery care during labor on labor duration. *Iran Journal of Nursing* 2009; **15**(2): 18-13
23. Grabowska C. Alternative therapies for pain relief. In: Page L, Yerby M, ed. *Pain in childbearing: key issue in management of pain*. 1st ed. Bailliere Tindall, London 2007, 317
24. Henderson C Macdonald S . *Mays Midwifery. A Textbook for Midwives*. 13th edition. London UK. Bailyere Tindall 2002.