Factors Related to Women's Childbirth Satisfaction in Physiologic and Routine Childbirth Groups

Abstract

Background: Women's satisfaction with childbirth is an important measure of the quality of maternity care services. This study aims to address factors related to women's childbirth satisfaction in physiological and routine childbirth groups. Materials and Methods: This descriptive-analytical study was conducted among 340 women in physiological and routine childbirth groups in 2012. Women were selected through convenience sampling method in the routine group and by census in the physiological group. Data were collected using a 5-part questionnaire composed of demographic and obstetrics details, Mackey's Childbirth Satisfaction Rating Scale (CSRS), satisfied with birth setting, Labor Agentry Scale (LAS), and Visual Analogue Scale (VAS), which was completed by interview 24 hours after childbirth. Data were analyzed using the Statistical Package for the Social Sciences version 18 software using Pearson correlation test, independent t-test, analysis of variance, and linear, multivariate regression model at the significant level of P < 0.05. Results: In both the physiological and routine childbirth groups, satisfaction was found related to the severity of pain (P < 0.05), self-control (P < 0.0001), and birth setting satisfaction (P < 0.0001). In the physiological group, satisfaction was significantly related to previous knowledge of childbirth ($\bar{P} = 0.024$), attitude toward the recent pregnancy (P = 0.007), and perceived severity of pain (P = 0.016). However, in the routine group, satisfaction was related only to intentional pregnancy (P = 0.002). In neither group, satisfaction was related to demographic characteristics, maternal parity, and participation in pregnancy and childbirth classes or maternal feelings toward the onset of childbirth (P > 0.05). Conclusions: Improved physical structure and setting of birth room, nonmedical pain relief, mothers' involvement in the process of labor, and sense of being in control are associated with mothers' satisfaction.

Keywords: Iran, labor, labor pain, midwifery, parturition, patient satisfaction

Introduction

Childbirth is one the most important events in a woman's life, leaving her with profound psychological, physical, and social effects.[1] Women's satisfaction with childbirth is an important measure of quality of reproductive health services and maternal Satisfaction with childbirth has immediate and long-term effects on women's health and quality of their relationship with their child.[2] Mothers with pleasant childbirth experience have greater self-esteem, stronger relationship with their child, and positive expectations of their future childbirths.[3] In contrast, dissatisfaction with childbirth leads to greater likelihood of postpartum anxiety,[4,5] depression, posttraumatic stress disorder, [6] impaired mother-infant bonding, [4] fear of the next child birth, [1] and choice of future caesarean section.[3] Satisfaction with childbirth is a complex

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concept with several dimensions and components, and no consensus exists for many of them. [2,6] Pain is one of the first and most challenging factors, [2] whose intensity and relief play a role in dissatisfaction with childbirth. [7] A number of studies have shown that maternal satisfaction increases with reducing severity of labor pain. [1,8] Yet, according to other studies, experiencing painful childbirth is not necessarily followed by women's dissatisfaction. [2,9,10]

Demographic characteristics^[2] and environmental, cultural, and family factors have been reported to affect maternal satisfaction, with contradictory results.^[11]

Personal control has been suggested as one of the important component of childbirth satisfaction. However, the determinants of maternal control over labor are not well-recognized. [12,13]

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Active maternal participation in the process and in decision-making have been proposed, however, not proven as factors involved in personal control and subsequent satisfaction.^[7]

Iran is currently in the transition from medical to physiological childbirth management.[14] In this childbirth mode, attempt is made to have the least medical intervention, observe mother's privacy, use nonmedical pain reduction methods, allow presence of a relative and mother's freedom to eat and drink and move about,[15] and emphasize maternal satisfaction and a pleasant childbirth experience.[16] However, not many studies have been conducted on the outcomes of this project, including maternal satisfaction. Considering contradictions regarding factors affecting satisfaction with childbirth, cultural and social differences, and very few results from a physiological childbirth plan in Iran, this study was conducted with the aim to assess factors related to satisfaction with childbirth in routine and physiological childbirth groups.

Materials and Methods

This is a descriptive-analytical study that was conducted on 340 women attending Ayatollah Mousavi hospital in Zanjan in physiological and routine groups in 2012.

Women included in this study met the following conditions: 18 to 45 years of age, 38 to 42 weeks of gestational age based on the first day of last menstruation or ultrasound under 12 weeks, singleton pregnancy with cephalic presentation, low-risk pregnancy (no chronic diseases or history of maternal infertility, prolonged rupture of the amniotic sac, first trimester bleeding, intrauterine growth restriction, amniotic fluid volume, or preeclampsia), and infant weighing 2500–4000 grams. Two groups were matched in terms of the mother's age, gestational age, and parity.

According to P1 = 0.3, and P2 = 0.45, from similar studies, [17,18] with α = 0.05 and β = 0.2, sample size was determined as 340 women in two groups; 170 women in each. Samples were selected by census in physiological group, and by convenient sampling in routine group, 24 hours after childbirth. The census selection was done in a way that every day list of mothers were given physiologic birth in the last 24 hours was prepared, and then the samples were selected from among them.

Before commencing the study, approval was obtained from the head of the hospital. Then, we explained to the all participants the objectives, confidentiality of data, and voluntary participation; the participants were then asked to sign a written consent before collecting data by interviews and reviewing mothers' medical records. It should be noted that the results of this study were partly published under the title "Comparing women's satisfaction in physiological and routine groups." [19]

In this study, we have used five part questionnaire for gathering data. Part one consisted of 11 sociodemographic and obstetric characters.

The second part of it included Mackey's Childbirth Satisfaction Rating Scale (CSRS) (29 questions) was scored based on 5-point Likert scale from totally dissatisfied (scoring 1 point) to totally satisfied (scoring 5 points), with an overall range of score varying from 29 to 145. Mackey's scales had already been translated into Persian and its reliability had been confirmed with Cronbach's alpha of 0.92.[17]

The third part of the tool consisted of satisfaction with birth room setting (8 questions). Same as the second one, it was a 5-point Likert scale ranging from totally dissatisfied (1 point) to totally satisfied (5 points). Validity of this part was confirmed through content validity based on views expressed by eight faculty members of Zanjan University of Medical Sciences. Reliability was confirmed in a pilot study of 30 participants with Cronbach's alpha 0.86.

Personal control during labor, "The fourth part of questionnaire," was derived from labor agentry scale, with scoring based on 5-point Likert scale from always (5 points) to never (1 point) in terms of positive and negative questions. Labor agentry scales had already been translated into Persian and its reliability have been confirmed with Cronbach's alpha 0.94.^[17] Visual Analogue Scale (VAS) was used for the determination of severity of labor pain.

According to the protocol of the study hospital, participants in the physiological childbirth group were selected from mothers who had spent stages of physiological labor in private rooms supervised by a trained midwife. Participants in the routine group were selected from women receiving routine care.

Data were analyzed in the Statistical Package for the Social Sciences version 18 software using Pearson correlation test to examine the relationship between labor satisfaction with maternal age, pain severity, personal control, and satisfaction with labor room. Independent t-test was used for analyzing the relationship between satisfaction with wanted pregnancy, the mother's occupation, familiarity with the process of delivery, and participation in childbirth preparation classes. Analysis of variance (ANOVA) was used for analyzing the relationship between satisfaction with maternal parity, educational, mother's feelings toward onset of pain, Mother's perception of severity of pain and attitude to pregnancy. Finally, all variables that have significant relation with childbirth satisfaction in the linear regression, were examined in multivariate regression model at the significance level P < 0.05.

Ethical considerations

Before starting work, the aim and the method of study was explained for all patients and written testimonial was taken. Also it was explained that all information would remain confidential. This study was approved by the Ethics Committee of Zanjan University of Medical Sciences (12/901232601).

Results

Mean age of mothers was found to be 25.84 (5.5) years in the routine group and 25.03 (4.9) years in the physiological group (P = 0.154). The majority of women had senior or junior high school education (58.8% in the physiological group and 47.1% in the routine group), and were mostly housewives (90.6% in the physiological and routine groups). Approximately 46.5% of women in the physiological group and 50% in the routine group were primiparous (P = 0.515). Mean gestational age was 38.96 (1.14) weeks in the routine group, and 38.91 (1.01) weeks in the physiological group (P = 0.687).

Regarding the relationship between childbirth satisfaction and demographic and obstetrics details, the present study results showed that satisfaction with the routine group was significantly related to the mother's age (P=0.023) and the other results are tabulated in Table 1.

Regarding the relationship of satisfaction with other main parameters, in both the physiological and routine groups, mothers' satisfaction was found significantly related to personal control (P < 0.001 in both the groups), pain severity (P < 0.001 in both the groups), and satisfaction with labor room ambience (P < 0.05 and P < 0.001, respectively, in the physiologic and routine groups).

Results of the stepwise multivariate regression test showed that, in the routine group, satisfaction with labor was significantly related to the severity of pain, personal control, satisfaction with labor room ambience, and wanted pregnancy [Table 2]. In the physiological group, satisfaction was found significantly related to the severity of pain, personal control, satisfaction with labor room ambience, previous experience of childbirth, attitude toward recent pregnancy, and perception of pain intensity [Table 2].

Discussion

According to the present study results, in both the physiological and routine childbirth groups, satisfaction was found to be related to the severity of pain, personal control, and satisfaction with labor room ambience. In the physiological group, satisfaction with childbirth was also significantly related to previous knowledge of labor, attitude toward recent pregnancy, and perception of severity of pain. However, in the routine group, satisfaction was significantly related to wanted pregnancy.

In both the groups, satisfaction was found significantly related to the severity of pain and personal control, which agrees with the results obtained in other similar studies.^[2,9,20-23] For satisfaction with childbirth, mothers

do not merely seek pain management, but they seem to draw greater satisfaction through pain control achieved with self-control and self-confidence.^[24] Mother's control dramatically affects her assessment of pain and experience of childbirth, ^[6,25,26] and cause satisfaction. ^[12,17] In fact, mothers will be satisfied if they can establish the right relationship with personnel, be understood by them, receive appropriate information, ^[27] and actively involved in decisions. ^[1,24,28] These issues strongly support the results found in the present study. Although both groups suffered equal severity of pain, mothers in physiological childbirth group enjoyed personal control and greater satisfaction. ^[19]

Other findings in the present study included the relationship of satisfaction with labor atmosphere, which is supported by results obtained in previous studies. [17,29] A safe, quiet, and clean childbirth environment, respect for the privacy of the parturient, and avoiding unnecessary medical interventions can be effective in mother's satisfaction with childbirth. [29]

In the physiological group, satisfaction with childbirth was found to be significantly related to previous labor experience, positive attitude toward recent pregnancy, and perception of severity of pain, whereas both groups were equally ready for childbirth. In a study by Kuo et al. planning and preparation for childbirth and realistic expectations had led to mothers' greater satisfaction and personal control.[30] Positive attitude toward childbirth leads to a greater control, less use of medical pain relief methods, [9] and greater satisfaction. [31] Readiness for childbirth was related to satisfaction only in the physiological group, which may be due to the fact that, in the physiological group, mothers' knowledge about labor is assessed at admission, and they are reminded of their expectations and responsibilities in the course of labor. Hence, mothers who rate themselves are more capable in this regard feel greater self-confidence, and are more satisfied with their performance.

No relationship was found between childbirth satisfaction and participation in childbirth preparation classes in any of the groups. This finding is in contrast with others results. [32-34] In the present study, ineffectiveness of preparation classes on women's satisfaction may be attributed to use of the Persian language in classes, in a city where people are mainly Turks. The majority of participants were educated to junior high school level and fluent in Turkish language, and thus, perhaps understanding many of the Persian terms was difficult for them. Hence, further studies are required in this area.

In neither group, satisfaction with childbirth was related to demographic characteristics. Studies conducted on patients' satisfaction have shown that demographic characteristics of people affect their satisfaction with medical services they receive, which appears to contradict their lack of effect on satisfaction with childbirth.^[4,10,17] Underlying factors appear to be more inconspicuous compared to other factors, and

Table 1: The relationship between demographic and obstetrics characteristics and childbirth satisfaction in routine and physiological groups

| Variable | Routine Group | | | | Physiologic Group | | | |
|-----------------------------|---------------|----------------|----------------|-------|-------------------|----------------|----------------|-------|
| - | Number | Mean (SD) | 95% Confidence | P | Number | Mean (SD) | 95% Confidence | P |
| | | , , , | interval | | | , , | interval | |
| Parity | | | | | | | | |
| Primigravida | 78 | 109.55 (12.79) | 106.66-112.43 | 0.245 | 84 | 121.47 (10.79) | 119.13-123.81 | 0.579 |
| Gravid 2 | 66 | 110.45 (12.14) | 107.46-113.43 | | 66 | 123.10 (9.65) | 120.73-125.47 | |
| Gravaid ≥3 | 23 | 114.39 (9.40) | 110.32-118.45 | | 18 | 123.22 (9.82) | 118.33-128.10 | |
| Education | | | | | | | | |
| Illiterate/primary | 67 | 112.20 (12) | 109.28-115.13 | 0.148 | 44 | 120.84 (10.91) | 117.52-124.15 | 0.228 |
| Junior/Senior high school | 80 | 108.66 (12.27) | 105.93-111.39 | | 99 | 122.21 (10.46) | 120.12-124.29 | |
| Higher education | 20 | 112.75 (11.63) | 1077.30-118.19 | | 25 | 125.24 (7.38) | 122.19-128.28 | |
| Mother's feelings toward | | , , | | | | | | |
| onset of pain | | | | | | | | |
| Fear, worry | 122 | 109.36 (12.29) | 107.26-111.46 | 0.026 | 122 | 121.32 (10.10) | 119.51-123.13 | 0.080 |
| Senseless | 25 | 117.21 (8.43) | 112.34-122.08 | | 25 | 123.52(12.23) | 118.47-128.56 | |
| Нарру | 21 | 114.21 (11.73) | 108.55-119.86 | | 21 | 126.52 (7.12) | 123.28-129.76 | |
| Mother's perception of | | | | | | | | |
| severity of pain | | | | | | | | |
| Little | 44 | 109.54 (10.29) | 106.41-112.67 | 0.751 | 41 | 119.58 (11.84) | 115.84-123.32 | |
| Moderate | 37 | 111.59 (13.97) | 106.93-116.25 | | 35 | 120 (10.79) | 116.29-123.70 | 0.013 |
| Severe | 86 | 110.66 (12.31) | 108.02-113.30 | | 92 | 124.39 (8.78) | 122.57-126.21 | |
| Occupation | | | | | | | | |
| Housewife | 153 | 110.60 (12.31) | | 0.926 | 152 | 122.03 (10.31) | | 0.264 |
| Practitioner | 14 | 110.28 (10.75) | | | 16 | 124.87(9.29) | | |
| Wanted pregnancy | | | | | | | | |
| Yes | 120 | 112.21 (11.53) | | 0.005 | 129 | 122.55 (9.91) | | 0.559 |
| No | 47 | 106.38 (12.82) | | | 39 | 121.46 (11.31) | | |
| Mother's knowledge of | | | | | | | | |
| labor process | | | | | | | | |
| Yes | 140 | 111.49 (12.14) | | 0.026 | 137 | 123.91 (9.07) | | 0.001 |
| No | 27 | 105.81 (11.30) | | | 31 | 115.19 (12.04) | | |
| Participation in childbirth | | | | | | | | |
| preparation classes | | | | | | | | |
| Yes | 17 | 116.23 (9.34) | | 0.043 | 25 | 126.72 (7.60) | | 0.005 |
| No | 150 | 109.93 (12.30) | | | 143 | 121.53 (10.45) | | |
| Attitude toward recent | | | | | | | | |
| pregnancy | | | | | | | | |
| Negative | 29 | 110.13 (12.66) | | 0.832 | 39 | 117.43 (11.19) | | 0.001 |
| Positive | 138 | 110.66 (12.10) | | | 129 | 123.77 (9.48) | | |

they can be affected by other skills and attributes acquired from mothers.

In the routine group, satisfaction was significantly related to wanted pregnancy. Similar finding was reported by Tayelgn *et al.*^[35]

Study limitations included taking into account only mothers' views, hence, future studies should consider the views of the obstetrics team and midwives, and even relatives of parturient and doulas. One of the limitations in this study was conducting sampling in only one hospital owing to the established physiological childbirth project in only one hospital in Zanjan. Further studies on the role

of obstetrics team, obstetricians, and childbirth preparation classes in providing satisfaction and increasing mother's personal control are absolutely essential.

Despite the abovementioned limitations, the present study results could provide useful information for enhancing mothers' satisfaction with childbirth and promotion of natural childbirth.

Conclusion

This study showed that mothers' satisfaction with natural childbirth will be ensured with mothers' knowledge of the childbirth process, utilization of nonmedical pain

Table 2: Multivariate regression test results for childbirth satisfaction in routine and physiological groups

| Groups | Variable | β | P |
|-------------------|---------------------------------------|--------|----------|
| Routine group | Severity of pain | -0.153 | 0.013 |
| | Satisfaction with labor room ambience | 0.237 | < 0.0001 |
| | Personal control | 0.511 | < 0.0001 |
| | Wanted pregnancy | -0.175 | 0.002 |
| Physiologic group | Severity of pain | -0.138 | 0.013 |
| | Satisfaction with childbirth setting | 0.247 | < 0.0001 |
| | Personal control | 0.482 | < 0.0001 |
| | Mother's knowledge of labor process | -0.127 | 0.024 |
| | Attitude toward recent pregnancy | 0.146 | 0.007 |
| | Perception of severity of pain | 0.130 | 0.016 |

relief techniques, and active involvement and maintaining control in the process of childbirth. Amid creating the right, safe, and quiet ambience is also among the most essential requirements to ascertain satisfaction with childbirth.

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Conflicts of interest

There are no conflicts of interest.

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