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# Effect of Childbirth Preparation Classes on Happiness during Pregnancy and Postpartum

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## Abstract

**Aims:** Pregnancy is the most stressful period of a woman's life and can lead to depression, anxiety, and obsessive-compulsive disorder. The participation of pregnant women in childbirth classes reduces the hospitalization period and increases their satisfaction with the childbirth experience. This study aimed to investigate the effect of childbirth classes on pregnancy and postpartum happiness.

**Materials & Methods:** This quasi-experimental study was carried out on pregnant women referring to health centers of Bojnurd City in 2016. Eighty pregnant women were randomly selected and divided into intervention and control groups. The subjects in the intervention group participated in childbirth classes, while the control group received routine prenatal care. The intervention group subjects completed the happiness and pregnancy profile questionnaires after participating in the eighth session of Childbirth and postpartum classes. Data were analyzed using SPSS 22 software through independent T, Mann–Whitney U tests, and repeated measure analysis of variance.

**Findings:** There was no significant difference in the happiness scores between the control and intervention groups before the intervention (p=0.235). There was a significant difference in score changes of the happiness in the intervention group (p=0.017), while no significant difference was observed in the control group (p=0.315).

**Conclusion:** Childbirth preparation classes increased the mother's level of happiness due to creating the connection among pregnant mothers, creating awareness of pregnancy changes, teaching pregnancy exercises, and informing the husband to care mother.

**Keywords**
Childbirth Preparation [Not Found];
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## Introduction

There are stages in every woman's life that have profound effects, such as the pregnancy period. Pregnancy and beyond are associated with considerable physical and psychological changes, which despite the joy of motherhood, it is sometimes accompanied by pathological changes. Pregnancy is a stressful period of life, and the possibility of conditions such as depression, anxiety, obsessive-compulsive disorder is high [1]. Pregnancy is a period of life during which hormonal changes such as increasing estrogen, progesterone, and cortisol occur. These hormonal changes cause mothers physiological and physical changes [2]. Some researchers believe that pregnancy is a psychological experience making many psychological changes in women. Without adequate support from family members or members of the medical committee, the fears increase and lead to depression and anxiety [3]. Pregnancy and childbirth are considered a crisis in women's lives, and it is important to pay attention to this physiological phenomenon. Unfortunately, the routine prenatal care program in Iran only includes measuring height, weight, blood pressure, uterine height, and checking the fetal heartbeat. Less attention is paid to the process of childbirth [4]. Therefore, maternal mental health is neglected. While, physical health depends on mental health, and the mother's mental health guarantees the health of the family and the child, who will be born soon [1]. Classes or prenatal education provides an opportunity to open up and correct misconceptions about pregnancy, childbirth, and postpartum issues that cause the mother's anxieties about her lack of self-confidence. Classes allow the pregnant mother to meet other eligible mothers, think, and focus on her personal needs and goals, have less anxiety and more confidence and how to adapt to the stages and pain of childbirth, and get acquainted with the resources of the community that works in this field [6]. Childbirth preparation classes can reduce pain and anxiety during childbirth and increase satisfaction by giving awareness and changing women's attitudes toward childbirth [7]. A set of psychological, social, and midwifery factors affect the mental health of postpartum mothers. The side effects on the child and mother can be prevented or minimized by controlling the factors, early diagnosis of the group at risk, and appropriate therapeutic action [8]. Happiness is one of the criteria of mental health, and happy people are biased in information processing and process and interpret events in a way that leads to their happiness and satisfaction [9]. Happiness has been defined as a combination of positive emotion, negative affect, and life satisfaction [10]. A study conducted in 2013 shows that participation of pregnant mothers in childbirth preparation classes reduces the duration of mothers' hospitalization and increases their satisfaction with the delivery experience. Therefore, it is suggested to hold the classes more widely in pregnancy care centers. Golmakani *et al*. also showed that happier people show better coping behaviors against labor pain [9].

Participating in childbirth preparation classes can be accompanied by reducing maternal stress, informing the mother, performing exercises during pregnancy, healthy nutrition, and familiarity with reducing labor pain, postpartum care, and affecting mothers' happiness by reducing stress. Due to the lack of access to similar research in this field, the importance of natural childbirth, and mothers' mental health, this study aimed to investigate the effect of childbirth preparation classes on pregnancy and postpartum happiness.

## Materials and Methods

This study was a controlled intervention in pregnant women in Bojnourd from July to August 2016. The sample size was calculated to be 35 people after the pilot study using the mean comparison formula (probability of first type error 1.96, test power 0.8) for each group. Considering the 10% probability of sample decline, 80 pregnant women were selected by random sampling method and were randomly (by drawing lots) divided into two groups of 40 people. Data was collected using a demographic and Oxford Happiness Questionnaires. The demographic questionnaire for mothers included age, duration of the marriage, number of pregnancies, number of abortions, number of live children, and gestational age at delivery, and demographic information for infants included the weight, height, and head circumference of the infant at birth and one and ten minutes Apgar scores.

The Happiness Questionnaire has 29 questions in five dimensions of life satisfaction (5 questions), self-esteem (8 questions), actual well-being (4 questions), satisfaction (7 questions), and positive mood (5 questions). The answers were scored using a 4-points Likert scale, including "completely disagree" (zero scores), "disagree" (1 score), "agree" (2 scores), and "completely agree" (3 scores). Each subject received a score between zero to 87, which a higher score indicated more happiness [8].

The validity of the Persian translation of the Oxford Happiness Questionnaire was confirmed by Hadinejad & Zareei [8] and several experts in 2006. The reliability of this questionnaire was also confirmed by Hadinejad & Zareei [8] through a retest with an interval of four weeks and a correlation coefficient of 0.78.

After obtaining permission from the officials and confirming the research in the ethics committee of North Khorasan University of Medical Sciences, the government centers which hold physiology delivery classes in Bojnourd (Bouali, Hor, Madani) were identified. Eighty women were randomly selected among the women referred to these health centers

who received routine pregnancy care and were in the 20th week of pregnancy. After explaining the aims of the research and obtaining informed consent, the subjects completed the demographic characteristics questionnaire and the happiness questionnaire. Since physiology delivery classes were held twice a week on Saturdays and Tuesdays, Saturday and Tuesday were chosen for the intervention group. Other weekdays were chosen for the control group (people who came only for routine pregnancy control). The intervention group subjects filled out the questionnaires after passing the eighth session of the preparation classes for childbirth and in the last month of pregnancy. The control group filled out the questionnaire in routine prenatal care at 36-38 weeks of pregnancy. The subjects (control group and intervention group) completed the questionnaires (the questionnaires of happiness and characteristics of the baby) after admission to the delivery unit and immediately after delivery or on the day after delivery.

Four people were excluded due to preterm delivery, and six people were excluded due to not completing the questionnaires correctly. Data were analyzed using SPSS 22 software through Mann-Whitney U (to compare the two groups in terms of number of pregnancies, number of abortions and number of live children, size of the baby's head at birth, Apgar score one and ten minutes), independent T-tests (to compare the two groups in terms of age, duration of the marriage, gestational age at delivery, infant height and weight at birth), and repeated measure analysis of variance (to compare happiness scores between the stages of each group).

## Findings

The average age of mothers in the intervention group was 28.2±3.5, and in the control group was 26.6±5.4 years (p=0.175). In addition, the two groups were homogeneous in terms of duration of the marriage, the number of pregnancies, abortions, and live children (Table 1).

**Table 1)** Comparison of mean age, duration of the marriage, number of pregnancies, abortions, and children between intervention and control groups

| Parameters | Intervention group | Control group | p-value |
|---|---|---|---|
| **Age** (year) | 28.2±3.5 | 26.6±5.4 | 0.175 |
| **Duration of marriage** | 6.0±2.8 | 5.5±4.1 | 0.611 |
| **Number of childbirth** | 0.2±0.4 | 0.7±0.8 | 0.061 |
| **Number of abortion** | 0.2±0.6 | 0.1±0.3 | 0.267 |
| **Number of live children** | 0.2±0.4 | 0.7±0.7 | 0.061 |

Gestational age at delivery was 272.0±9.9 days in the intervention group and 274.0±6.8 in the control group (p=0.37). Also, the two groups were homogeneous in terms of weight, height, head circumference at birth, and one and 10-minutes Apgar scores (Table 2).

**Table 2)** Comparison of mean gestational age at delivery time, weight, height, head circumference, 1 and 10 minutes Apgar score between intervention and control groups

| Parameters | Intervention group | Control group | p-value |
|---|---|---|---|
| **Gestational age at delivery** (days) | 272.0±9.9 | 274.0±6.8 | 0.37 |
| **Birth weight** (g) | 3329.6 ±424.0 | 3157.6 ±382.1 | 0.104 |
| **Height at birth** (cm) | 51.4±2.8 | 50.9±2.4 | 0.096 |
| **Head circumference at birth** (cm) | 33.8±2.3 | 32.9±1.5 | 0.161 |
| **1-minute Apgar score** | 8.9±0.3 | 9.0±0.3 | 0.165 |
| **10-minute Apgar score** | 9.9±0.1 | 9.0±0.1 | 0.999 |

There was no significant difference between the happiness scores in the control and intervention groups based on the independent T-test (p=0.235). Changes in happiness scores were significantly different in the intervention group (p = 0.017), but no significant difference was observed in the control group (p=0.315; Table 3).

**Table 3)** Comparison between the average scores of happiness in the intervention and control groups before the intervention, at the end of pregnancy, and after delivery

| Parameters | Intervention group | Control group | p-value* |
|---|---|---|---|
| **Before intervention** | 81.3±10.6 | 78.0±1.6 | 0.235 |
| **After intervention** | 82.4±11.6 | 83.2±13.5 | 0.814 |
| **After delivery** | 84.1±12.9 | 79.4±14.9 | 0.196 |
| **p-value**** | 0.017 | 0.315 | |

*independent T-test;**analysis of variance in repeated measures

## Discussion

This study aimed to evaluate the effect of childbirth preparation classes on pregnancy and postpartum happiness. The present study results indicate a positive change and a significant increase in the mean score of happiness in the intervention group. Although the postpartum happiness score in the intervention group was higher than the control group, the difference was not significant. The maternity process is one of the most enjoyable and evolving events in a woman's life. It often brings great happiness to parents, whereas some physical and psychological changes can also make tensions and worries leading to a decrease in happiness during pregnancy [12]. In pregnancy, due to emotional support, it is not unreasonable to expect an increase in the level of happiness during this period; some studies, such as Sable & Libbus, have reported increased levels of happiness in unwanted pregnancies in half of the pregnant mothers [13]. Studies have shown that the level of happiness in pregnancy increases due to the feeling of self-fulfillment and consolidation of women's sexual identity in pregnancy [14]. In a study by Jayasvasti & Kanchanatawan in Thailand on factors related to happiness in pregnancy, none of the subjects had a low level of happiness during pregnancy [15]. Several

researchers have studied the effect of childbirth preparation classes on various pregnancy situations. Participation in childbirth preparation classes has been reported as a safe way to improve attitudes, improve mood vitality, reduce fear of childbirth, increase normal delivery, and increase pregnancy satisfaction in pregnant women [16-19]. Also, in a review study in 1397, researchers showed that childbirth preparation classes effectively empowered pregnant mothers [20].

In the research background, no direct studies have been conducted to investigate the effect of childbirth preparation classes on maternal happiness. We couldn't compare the findings with similar studies. The results revealed that participating in childbirth preparation classes and performing prenatal care, providing group training, use of the experiences of other mothers, providing appropriate information to mothers about events that they may experience as well as self-care methods lead to the breaking the cycle of pain, fear, tension and muscle stiffness and thus achieving the desired results of childbirth and improving the level of happiness of the mother. According to Bradley's theory, prior knowledge is essential to entering an unfamiliar and scary environment. According to this theory, educating mothers creates a positive attitude towards childbirth and increases their self-confidence. Also, in the present study, mothers who had received the training session had a higher level of happiness than the control group and had more active participation in the delivery process [14, 21].

Shakouri *et al*. stated the positive effect of self-care programs presented in childbirth preparation classes on maternal anxiety [12]. Although the program used in this study is different from the self-care method of the anti-anxiety training protocol in Shakouri *et al*.'s study, both emphasize the important role of these programs in reducing anxiety in pregnancy, increasing satisfaction, and indirectly enhancing happiness. Participating in childbirth preparation classes and receiving group training and mothers' use of each other's experiences, in addition to receiving social support and happiness, leads to body activation excitement and increases the level of arousal, and promotes happiness [9, 22].

The results showed that the mean scores of happiness in both groups indicate a high level of happiness, and this shows that despite the physical and psychological changes, tensions, and worries associated with pregnancy, the process of motherhood is still an enjoyable and evolutionary event in women's lives. Motherhood processes can also be stressful, whereas the mothers' happiness can be increased by easy, simple, supportive activities.

One of the limitations of this study is the lack of cooperation of participants to complete the questionnaire, which led to the elimination of the incomplete questionnaires.

## Conclusion

Participating in childbirth preparation classes increases the mother's level of happiness due to creating the connection among pregnant mothers, creating awareness of pregnancy changes, teaching pregnancy exercises, and informing the husband to care mother.

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## References

1- Nazari S, Hajian S, Abbasi S, Alavi Majd H. A Review of postpartum care education and care interventions in Iran. Sci J Kurdistan Univ Med Sci. 2021;26 (3):86-104. [Persian]

2- Cunningham F, Leveno K, Bloom S, Hauth J, Rouse D, Spong C. Williams obstetrics. 23rd Edition, New York: McGraw Hill Medical Publishing; 2018.

3- Harris B, Lovett L, Smith J, Read G. Cardiff puerperal mood and hormone study III, postnatal depression at 5 to 6 weeks postpartum and its hormonal correlates across the peripartum period. Br J Psychiatry. 1996;168(6):739-44.

4- Alipour P, Alizadeh S, Moghaddam Tabrizi F, Sayadi H. The effect of antenatal preparation classes on self-efficacy in coping with childbirth in pregnant women referring to Fatemeh polyclinic and other health care centers in Urmia in 2015. Nurs Midwifery J. 2017;14(10):859-66. [Persian]

5- Adefuye PO, Fakoya TA, Odusoga OL, Adefuye BO, Ogunsemi SO, Akindele RA. Post-partum mental disorders in Sagamu. East Afr Med J. 2008;85(12):607-11.

6- Howharn C. Effects of childbirth preparation classes on self-efficacy in coping with labor pain in Thai primiparas [dissertation]. Texas: The University of Texas at Austin; 2008.

7- Khosravi M, Kohan SH, Hydari Z, Sohrabi Z. An evaluation of the effect of physiological childbirth preparation classes during pregnancy on vaginal delivery self-efficacy of women in selected centers of Isfahan, Iran. Health Syst Res. 2017;13(2):134-9. [Persian]

8- Hadinejad H, Zareei F. Reliability, validity and normalization of the oxford happiness questionnaire.

Psychol Res. 2009;12(1- 2):62-77.
9- Golmakani N, Hashemi-Asl M, Sadjadi A, Ebrahimzade S. Relationship between happiness during pregnancy, and labor pain-coping behaviors. Evid Based Care J. 2012;2(2):87-95.
10- Munk-Olsen T, Laursen TM, Mendelson T, Pedersen CB, Mors O, Mortensen PB. Risks and predictors of readmission for a mental disorder during the postpartum period. Arch Gen Psychiatry. 2009;66(2):189-95.
11- Jamilian M, Mobseri SH, Vakilian K, Jamilian H. Effect of childbirth preparation classes on the duration of admission and satisfaction of mothers. Sci J Ilam Univ Med Sci. 2013;21(2):44-50. [Persian]
12- Shakouri N, Noroozi H, Tafazoli M, Mazlom S. Effect of the "Orem Self Care Model"-based educational-supportive intervention on the anxiety of Primigravidae. Horizon Med Sci. 2018;24(1):41-6. [Persian]
13- Sable M, Libbus M. Pregnancy intention and pregnancy happiness: Are they different?. Matern Child Health J. 2000;4(3):191-6.
14- Asefi F, Delaram A, Kazemian A, Bahadoran P. The effect of pregnant women attending in childbirth preparation classes on their attitude toward mode of delivery. J Clin Nurs Midwifery. 2016;5(3):44-52. [Persian]
15- Jayasvasti K, Kanchanatawan B. Happiness and related factors in pregnant women. J Med Assoc Thai. 2005;889Suppl 4):S220-5.
16- Bahadoran P, Asefi F, Oreyzi H, Valiani M. The effect of participating in the labor preparation classes on maternal vitality and positive affect during the pregnancy and after the labor. Iran J Nurs Midwifery Res. 2010;15(Suppl 1):331-6.
17- Khorsandi M, Ghofranipour F, Heydarnia A, Faghih Zadeh S, Vafaei M, Rousta F, et al. The effect of childbirth preparation classes on childbirth fear and normal delivery among primiparous women. Arak Med Univ J. 2008;11(3):29-36. [Persian]
18- Lumley J, Brown S. Attenders and nonattenders at childbirth education classes in Australia: How do they and their births differ?. Birth. 1993;20(3):123-30.
19- Toughyani R, Ramezani MA, Izadi M, Shahidi Sh, Aghdak P, Motie Z, et al. The effect of prenatal care group education on pregnant mothers' knowledge, attitude and practice. Iran J Med Educ. 2008;7(2):317-24. [Persian]
20- Rajabi Naeeni M, Simbar M. Effect of child birth preparation classes on empowering Iranian pregnant women: A systematic review. J Educ Community Health. 2018;5(1):61-71. [Persian]
21- Cheng Ch, Pickler R. Maternal psychological well-being and salivary cortisol in late pregnancy and early post-partum. Stress Health. 2009;26(3):215-24.
22- Mirshah Jafary SA, Abedy M, Darikondy H. Happiness and effective factor. Adv Cognitive Sci. 2002;4(3):50-7. [Persian]