



# Effect of Childbirth Preparation Classes on Quality of Life in Pregnant Women

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**Abstract:** *Introduction: Pregnancy is a period in which there are many physical, hormonal and emotional changes in the health status of pregnant women and have a significant impact on the health-related quality of life. The purpose of this study was to determine the effect of childbirth preparation classes on health-related quality of life in pregnant women. Methods: This was a semi-experimental interventional study that was carried out on 80 pregnant women referring to Sina hospital in Karoon city, Iran. Selection of samples was purposeful. For the intervention group, childbirth preparation classes were held in eight sessions from 20th week of pregnancy. The control group only received routine prenatal visits. At the end of pregnancy, quality of life was measured by SF36 questionnaire and compared in two groups. Results: According to the findings of this study, the intervention group had a significantly better score of quality of life in comparison with the control group. The intervention group received higher scores in terms of general health, physical function, physical pain, mental health, limitation of movement due to emotional problems and social function than the control group. Other dimensions including limitation of movement due to physical problems and feeling of jolly were statistically similar in both groups. Conclusion: Improving the information and knowledge of mothers in the form of holding childbirth preparation classes can improve the health of mothers and their quality of life. In order to achieve the health of mothers, it is better to more focus on the dimensions of limitation of movement due to physical problems and Feel jolly.*

**Keywords:** *Quality of life, Pregnancy, Prenatal Education*

## INTRODUCTION

In response to an excessive increase in cesarean section (C/S) rates and complications from medicalization of normal delivery, in 1996 the Coalition for Improving Maternity Services (CIMS) in the United States recorded its first agreement to improve normal delivery. In this way, the term "mother-friendly hospital" was born for the first time (Lothian, 2007). In Iran, in the second half of 2002, the Ministry of Health and Medical Education started designing the content of mother-friendly services. In this plan, the construction of new hospitals was not considered, but the modification of the workflow and the change in the content of present services in the existing wards of hospitals were considered (Comprehensive Guide for the provision of obstetric services, 1391).

One of the actions of mother-friendly hospitals is providing adequate training for pregnant women with emphasis on increasing their awareness. The principles of childbirth preparation classes are to provide accurate information to the mothers to reduce their fear and anxiety, learn relaxation techniques, control

their muscles, breathing techniques, and create a quiet and supportive environment for the mother (Lally et al., 2008; Lamaze international, 2007; Soufizadeh et al., 2013). In Iran, childbirth preparation classes are started from the 20th week of pregnancy and will be held in eight sessions. Many studies have been done on the effect of childbirth preparation classes on the labor experience and its outcomes (Lally et al., 2008; Cwiek et al., 2003; Miquelutti et al., 2013), but few studies have been conducted on the impact of these classes on the quality of life of pregnant women (Bahrami et al., 2013).

According to WHO, quality of life is a broad and multidimensional concept that embraces physical, mental, social, and environmental aspects of life, and emphasizes on individual and mental assessments. This concept is completely personal and is not visible and measurable by others and is based on people's understanding from different aspects of their lives. The concept of health-related quality assesses the impact of mental and physical health on people's lives (Schram et al., 2009; Beck CA, Shah, 2012; Group, 1995).

Since pregnancy is a period in which there are many physical, hormonal and emotional changes in the health status of women and have a significant impact on the quality of life associated with health (Shishehgar et al., 2014; Musskopf et al., 2018); therefore, it is essential to perform interventions to improve the quality of life of pregnant women. The present study aimed to evaluate the effect of childbirth preparation classes on health-related quality of life in pregnant women.

## Method

The present study was a quasi-experimental interventional study that was conducted in 2017 in Sina mother-friendly hospital in Karoon, Khuzestan province, south of Iran. The target population was pregnant women who participated in childbirth preparation classes. Also, pregnant women who only received routine prenatal care were also in the target population and were placed in the control group.

The sample size was estimated by a pilot study using the formula for determining the sample size for comparing the mean of the two groups and resulted to 40 subjects per group.

Sampling criteria (eligibility criteria) include a list of essential characteristics for membership or suitability in the target population (Grove et al., 2012). The inclusion criteria of this study were as follows: low-risk pregnant women, reading and writing literacy, single pregnancy, full participation in childbirth preparation classes (for intervention group) and consent to participate in the study. Exit exclusion criteria included incomplete response to questionnaire and mention a history of psychological problems by the client.

Selection of the samples was done purposefully and in the following way: First, the researcher attended the prenatal clinic and identified low-risk pregnant women with a single pregnancy and given the necessary explanations to them and obtained consent from. In this way, those who have a tendency to continuous attendance at the childbirth preparation classes have been included in the intervention group. Control group were also those who accepted the participation to study, but did not participate in the classes and just received routine prenatal visits. It should be noted that the matching method was used to control the external variables. Thus, for each sample in the intervention group, a relatively similar unit was selected for the control group for external important variables.

Childbirth preparation classes was started from the beginning of the 20th week of pregnancy and at regular intervals, for a period of ninety minutes per session, in a standard equipped in the hospital. The instructor of these classes was a trained midwife who had a certificate of prenatal education approved by the Iran's Ministry of Health.

The educational contents of each session were in accordance with the Ministry of Health's instructions. Excerpts from these topics were: theoretical education including anatomy, physiology, risk symptoms, nutrition in pregnancy, personal and mental health of mothers, fetal growth and development, supportive techniques, choice of delivery method, high risk delivery, postpartum period, care givers role, responsibilities of mother about herself and her child (Lally et al., 2008). In the final session a visit of the labor and delivery

rooms and familiarity with the necessary equipment was carried out with the presence of mothers and their companions.

The data were collected through a self-made demographic questionnaire and short form questionnaire of quality of life. The short form questionnaire, SF36, is a health measurement tool that can measure quality of life well. This questionnaire contains 36 questions in eight different dimensions of quality of life that includes dimensions of: general health, physical function, physical pain, mental health, limitation of movement due to emotional problems, limitation of movement due to physical problems, social function and feeling of jolly. The total score of the eight-dimensional questions represents the overall score of the quality of life associated with health in individuals ranging from 148-36 (Likert method). Higher scores highlight a better quality of life (Bowling, 2005). Validity and reliability of the Persian version of this questionnaire have been confirmed by the Institute of Health Sciences, Jahad University (Montazeri et al., 2005).

The questionnaires were completed after the final session of the physiological preparation classes in the intervention group and in the final prenatal visits for the control group.

The obtained data were entered into SPSS software version 16.0 and analyzed by descriptive statistics, Smirnov Kolmogorov, Chi-square and independent t-tests in 95% confidence interval.

## Results

The mean age of participants was  $26.9 \pm 5.3$  years old. There was no significant difference between the two groups in terms of maternal age, education level, number of pregnancies and acceptance of pregnancy (Table 1).

Table 2 shows the overall score of quality of life in the study population and in each of the groups. According to the findings of this table, the intervention group had a statistically better score of quality of life compared to the control group.

Table 3 compares the eight dimensions of quality of life in the two groups. The intervention group received higher scores in terms of general health, physical function, physical pain, mental health, limitation of movement due to emotional problems and social function than the control group. Other dimensions including limitation of movement due to physical problems and feeling of jolly were statistically similar in both groups.

## Discussion

The findings of this study showed that full attendance in childbirth preparation classes improves the health-related quality of life in pregnancy. A study by Bahrami et al. showed that prenatal preparation classes cause women to have significantly higher scores in quality of life in terms of physical, psychological and environmental health than the control group (Bahrami et al., 2013).

In the present study, the mothers of the intervention group trained in eight sessions during pregnancy and visited the maternity ward. Lack of awareness can lead to fear and anxiety during pregnancy and childbirth, which can affect the quality of life of the individual (Mehdizadeh et al., 2005).

Findings of the study showed that the intervention could not affect the dimensions of limitation of movement due to physical problems and feeling of jolly. A study performed by Makvandi and Etemadi in pregnant women of Izeh city showed that the quality of life of these people in terms of limitation of movement due to physical problems and feeling of jolly are lower than other dimensions (Makvandi, Etemadi Kermani, 2010). Another study also found that pregnant women had a low level of quality of life in terms of physical pain, feeling of jolly, and limitation of movement due to physical problems (Otchet et al., 1999). These findings are consistent with the present study. Anatomical and physiological changes in the body during pregnancy and the occurrence of a series of discomforts and problems during this period, such as nausea and vomiting, fatigue, back pain, and muscle cramp can have a significant effect on daily activities of pregnant women and limit their ability to perform routine roles (Abbaszadeh et al., 2010).

One of the limitations of this study was the impossibility of random selection of samples. The reason is that physiologic childbirth program is a new phenomenon in Iran and the first part of this program is holding the childbirth preparation classes. According to policies behind the physiologic childbirth program, we cannot force pregnant women to attend childbirth preparation classes; because one of the principles of the physiologic childbirth program is to give pregnant women the power of decision making. In fact, all of pregnant women invite to attend childbirth preparation classes, but the decision-making power in this regard is on their own. Therefore, authors were forced to use purposive sampling, but they used a marching method to control external variables and reduce the likelihood of bias.

**Conclusion**

The findings of this study showed that improving the knowledge of mothers in the form of holding childbirth preparation classes in turn could improve the health-related quality of life of pregnant women. In order to achieve the health of mothers that ensures the health of the community, it is necessary to pay more attention to the quality of life during pregnancy and in particular to the dimensions with lower scores. Further studies are needed to strengthen the existing knowledge on the impact of childbirth preparation classes on the quality of life of pregnant women.

**Table 1.** Comparison of demographic characteristics in the two groups

		Intervention group (n=40)		Control group (n=40)		P value
		n	percent	n	percent	
Age	17-22	8	20	13	32.5	0.06
	23-27	8	20	14	35	
	28-32	16	40	6	15	
	33-38	8	20	7	17.5	
Gravida	1	16	40	18	45	0.46
	2	16	40	11	27.5	
	3≤	8	20	11	27.5	
Acceptance of pregnancy	yes	32	80	35	62.5	0.36
	no	8	20	5	12.5	
Level of education	primary	19	47.5	12	30	0.25
	secondary	16	40	20	50	
	university	5	12.5	8	20	

**Table 2.** Overall Quality of Life Score in two groups

	Mean±SD	Normal range	P value
Intervention group (n=40)	104.1±15.5	36-148	0.004
Control group (n=40)	94.1±14.8		
Total	98±15.9		

**Table 3.** Comparison of the eight dimensions of quality of life in the two groups

Dimensions of quality of life	Intervention group (n=40)	Control group (n=40)	Normal range	P value
General health	14.7±2.8	13.1±2.6	4-20	0.01
Physical function	26.1±2.4	20.7±4.9	10-30	<0.0001
Physical pain	7.1±2.2	6.1±2.3	2-10	0.02
Limitation of movement due to physical problems	6.4±2.1	6.1±1.5	4-8	0.7
Mental health	5.6±1.3	4.5±1.2	3-6	<0.0001
Feeling of jolly	36.1±9.8	33.7±9.5	9-54	0.2

Limitation of movement due to emotional problems	4.2±0.99	3.6±1.3	1-5	0.04
Social function	5.1±0.6	4.2±1.6	1-6	0.003

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