

# The effect of spouses' educational classes held for primiparous women referring to Hajar hospital on their quality of life and pregnancy outcomes

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## ABSTRACT

**Background:** With regard to the importance of quality of life in pregnant women, the present study aimed to determine the effect of spouses' educational classes held for primiparous women referring to Hajar hospital on women's quality of life and pregnancy outcomes.

**Materials and Methods:** This clinical trial was conducted from September 2011 to June 2012 in the clinic of the Hajar university center in Shahrekord. Eligible primiparous women who registered for physiologic delivery educational classes were randomly assigned to study ( $n = 31$ ) and control ( $n = 27$ ) groups. In the control group, eight physiologic delivery educational sessions were held. In the study group, in addition to attendance of pregnant women, their husbands also attended the third and the eighth sessions of these classes. Women's quality of life was investigated with SF36 questionnaire and pregnancy outcomes after delivery were investigated. Data were analyzed by *t*-test and Chi-square test.

**Results:** Before intervention, there was no significant difference between scores of quality of life and demographic characteristics ( $P > 0.05$ ). After intervention, there was a significant difference only in the dimensions of mental health, hugging time, kissing, and breast feeding between the study and control groups ( $P < 0.05$ ). There was no significant difference in gestational age, gravida, number of miscarriages, pregnancy outcomes, and spouses' age ( $P > 0.05$ ).

**Conclusions:** Educational classes held for the pregnant women's husbands during pregnancy can be efficient in promotion of pregnant women's quality of life, especially in improving their mental health.

**Key words:** Iran, pregnancy outcome, prenatal education, quality of life, spouses

## INTRODUCTION

The birth of the first child is a unique event for most of the parents. Although pregnancy period is full of stress and associated with physiologic and psychological changes, it is a pleasant time for most of the women. These changes can also lead to impaired ability of the women in playing their routine life roles even in a normal pregnancy.<sup>[1]</sup> In other words, in pregnancy period, physical, psychological and social health and totally pregnant women's quality of life (QOL) face a lots of changes. QOL includes different dimensions of individuals' physical, psychological,

mental health and social comfort. These dimensions are measurable during pregnancy and measurement of QOL is of great importance in health policy makers' planning for maternal care, and perception and understanding of the necessity of such care.<sup>[2]</sup>

Research shows the parents' anxiety and concern is higher for their first child's birth. Expectant fathers usually have worries and concerns for their fatherhood role, which are not observed among experienced fathers. Therefore, these fathers should be given special attention.<sup>[3]</sup> Nowadays, it is believed that men's participation is an essential issue to succeed in prenatal health programs, and leads to positive outcome in maternal health.<sup>[4]</sup> In antenatal education classes, training of neuromuscular exercises, correct respiration and relaxation, concentration exercises, and proper position during delivery help the mother pass the pregnancy and different stages of labor with the minimum complications.<sup>[5]</sup> These classes, on development of physiologic delivery, are held in some provinces including Charmahal and Bakhtiari in Iran. In fact, in most of the provinces, including this province, the husbands are not invited to such classes of pregnancy preparation. In other words, for prenatal, antenatal, and

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postnatal planning, their role is ignored, although the role of the husband is so important in his spouse's physiologic delivery as many of the pregnancy outcomes are modified by the presence of the husband during delivery.<sup>[6]</sup> Numerous studies showed the positive effect of educational programs held for the husbands on pregnant women's health behaviors, exclusive breast feeding, supportive behaviors, more appropriate relationship with the women during pregnancy, reduction of fathers' anxiety, as well as the positive effect on men's and women's knowledge, attitude, and practice in the context of prenatal health.<sup>[3,7-8]</sup> Limited studies have been conducted to determine the effect of educational classes held for the husbands on QOL and pregnancy outcomes. Therefore, with regard to the important role of husbands in the trend of pregnancy and the importance of QOL in this period and its effect on future health of a society, and the fact that individuals' perception of QOL is under the influence of their beliefs and cultures, the researchers decided to investigate the effect of spouses' educational classes held for primiparous pregnant women referring to Hajar hospital on their QOL and pregnancy outcomes.

## MATERIALS AND METHODS

This clinical trial was conducted from September 2011 to June 2012 in Hajar university clinic in Shahrekord. Study population comprised all primiparous women attending delivery preparation classes together with their husbands. Sampling was convenient sampling, and the subjects were assigned to study and control groups through random allocation. After obtaining permission from the vice-chancellery for research, a code was given to all participants of these classes. Then, by computer, samples were randomly assigned to study and control groups. Research goals and method were explained to the subjects, and through their agreement, consent was obtained from them. SF36 QOL (questionnaires of QOL) and demographic characteristics questionnaire were completed by the pregnant women in both groups before the classes were started. Educational classes in both groups were held from the 20<sup>th</sup> week of gestational age, based on national physiologic delivery protocol, as eight 90-min sessions with a 2-week interval.

These eight sessions comprised education on fertility system, body changes and adaptations in pregnancy, fetal growth and development, personal care and nutrition in pregnancy, personal health, signs of a high-risk pregnancy, mental health and preparation for motherhood and fatherhood (parental role), delivery pain relief methods, delivery planning, postpartum period, post-delivery physical exams, neonatal care, etc. In the intervention group, the pregnant women's husbands attended the third and the eight sessions, in which emphasis on psychological health and

care and delivery preparation was given. Based on national protocol of delivery preparation classes, the third and the eighth sessions are conducted as coeducation classes (the pregnant women and their husbands participated). In the control group, the pregnant women who attended the antenatal education class were trained individually. Women in two groups filled the QOL questionnaire before starting the classes and 3 weeks after the end of the sessions.

Inclusion criteria were primiparous women with gestational age of 20 weeks, singleton pregnancy, and being literate for reading and writing. Exclusion criteria were history previous marriage, history of diagnosed mental disorders in spouses and being under treatment, and any complications changing the normal course of the pregnancy, such as internal and surgical diseases during pregnancy and preeclampsia. Data were collected by a checklist and a questionnaire which contained two sections. The first section was on demographic characteristics and the second was a brief version of SF36, which measures QOL and whose Persian version's validity and reliability have been already established.<sup>[9]</sup> This questionnaire has 36 items in eight domains including physical functioning (10 items), role limitations due to physical health (4 items), role limitations due to emotional problems (3 items), energy/fatigue (4 items), emotional well-being or mental health (5 items), social functioning (2 items), pain (2 items), and general health (5 items). These eight dimensions are scored 0–100 points. Higher scores show better health status. The checklist that investigates pregnancy outcomes contained items on mothers' weight gain, neonates' height, neonates' head circumference, type of delivery, neonates' birth weight, and APGAR score in the first and the fifth minutes.

Data were analyzed by descriptive statistical tests (mean, frequency distribution) and analytical tests like *t*-test (to compare quantitative variables such as neonates' weight, parents' age, QOL, gestational age, etc., in both groups) and Chi-square test (to compare qualitative variables in the two groups, such as history of miscarriage, parents' education and occupations, etc.) through SPSS software (16.0, SPSS Inc., Chicago, Ill, USA).

The ethics committee of Shahrekord Medical Sciences University approved the research protocol.

## RESULTS

In the present study, 31 and 30 subjects formed the study and control groups, respectively. In the control group, three subjects were left out of the study (due to preterm labor and intrauterine fetal death), and the study was finally conducted with 31 and 27 subjects in the study and control

groups, respectively. There was no significant difference in pregnant women's age, husbands' age, gravida, number of miscarriages, and duration of marriage between the study and control groups ( $P > 0.05$ ) [Table 1].

Most of the women in the control and study groups were housewives (67.7% and 53.6%, respectively) and the difference was not significant ( $P = 0.199$ ). Most of the husbands in both groups were self-employed, and there was no significant difference in husbands' jobs ( $P = 0.524$ ). In addition, there was no significant difference in the type of delivery and its complications ( $P = 0.3$  and  $P = 0.45$ , respectively). About 80% of the fathers attending the classes demanded for holding classes after delivery.

There was no significant difference in the total score and different dimensions of QOL before intervention in both groups [Table 2]. Three weeks after the end of intervention (37<sup>th</sup> week of pregnancy), QOL was investigated in the two groups. The results showed a significant difference just in the dimension of emotional well-being (mental health) in the two groups ( $P = 0.04$ ), and in intervention group, this dimension showed a better condition [Table 3]. Comparison of pregnancy outcomes in the two groups showed no significant difference, but at the time of hugging, kissing, and start of breast feeding of the neonates, there was a significant difference and the study group experienced a better condition [Table 4].

## DISCUSSION

Research shows that during pregnancy, pregnant women's physical, mental, and social health and total QOL undergo

**Table 1: Comparison of personal characteristics in both groups before intervention**

Group	Mean (SD)	P value
Pregnant women's age (years)		
Study	26.74 (3.64)	0.86
Control	26.92 (4.67)	
Husbands' age (years)		
Study	29.93 (3.92)	0.9
Control	29.81 (4.00)	
Marriage length (months)		
Study	29.67 (24.2)	0.32
Control	24.07 (17.17)	
Gravida		
Study	1.16 (.37)	0.31
Control	1.07 (0.26)	
Number of miscarriages		
Study	0.37 (0.16)	0.31
Control	0.26 (0.07)	

SD: Standard deviation

numerous changes.<sup>[2]</sup> Tendias *et al.* and Abaszadeh *et al.* also reported a reduction in all QOL dimension scores, except for mental health during pregnancy.<sup>[10,11]</sup> In the present study, mental health condition was significantly better in the intervention group compared to the control group. The mental health of the mother is important not only for herself but also for the physical and psychological health of her children and the welfare of the family. The importance of a good partner's involvement that consists of emotional support should be highlighted to all expecting couples.<sup>[12]</sup> Other dimensions of QOL showed no significant difference between the two groups. The education presented in pregnancy preparation classes helps the mothers achieve more dynamic physical and mental condition.<sup>[5]</sup> Meanwhile, in the present study, despite mother' participation in educational classes, their QOL had not been improved, which was possibly associated with the content, number of sessions, and related problems of the pregnant women during pregnancy. This issue needs more investigation and a revision on the related programs with emphasis on various aspects of pregnant women's

**Table 2: Comparison of QOL dimensions in two groups before intervention**

Group	Mean (SD)	P value
Physical function		
Study	65 (16.70)	0.16
Control	58.7 (18)	
Role limitations due to physical health		
Study	43.54 (34.13)	0.19
Control	32.4 (29.26)	
Role limitations due to emotional problems		
Study	84.154 (94.04)	0.10
Control	58.11 (93.48)	
Energy		
Study	78.19 (51.27)	0.48
Control	48.18 (59.9)	
Emotional well-being		
Study	61.29 (89.66)	0.90
Control	19.28 (72.68)	
Social function		
Study	16.98 (72.17)	0.14
Control	20.52 (64.81)	
Pain		
Study	73.95 (17.65)	0.31
Control	68.79 (21.14)	
General health		
Study	67.41 (16.72)	0.97
Control	67.59 (18.1)	

\*The difference is not significant in any of the domains in the two groups after intervention. SD: Standard deviation, QOL: Quality of life,  $P < 0.05$  considered significant

**Table 3: Comparison of QOL dimensions in two groups after intervention**

	Mean (SD)	P value
Physical function		
Study	59.83	0.5
Control	56.11 (20.11)	
Role limitations due to physical health		
Study	59.83	0.48
Control	27.77 (24.20)	
Role limitations due to emotional problems		
Study	40.81 (41.90)	0.99
Control	40.74 (38.49)	
Energy		
Study	59.67 (14.99)	0.14
Control	53.51 (16.85)	
Emotional well-being		
Study	71.33 (17.00)	0.04*
Control	63.25 (14.33)	
Social function		
Study	68.95 (19.86)	0.34
Control	63.88 (20.89)	
Pain		
Study	57.82 (27.68)	0.54
Control	61.58 (21.01)	
General health		
Study	68.87 (17.78)	0.97
Control	68.70 (17.83)	

\*There is a significant difference in the dimension of emotional well-being. SD: Standard deviation, QOL: Quality of life

QOL. Mothers' lifestyle can be positively changed and their physical health can be improved through provision of emotional, informational, and economic support, decrease of their physical and psychological pressure during pregnancy, as well as motivating and encouraging them to follow health behaviors. Therefore, family and social support during pregnancy is essential in an effective intervention for improving women's health. Among the existing supportive resources, support provided by the subjects' partners is very important. Although a number of studies mention the benefits of male partner attendance,<sup>[13]</sup> various studies on the effect of pregnant women's family members' support, especially that of their marital partners, on physical and mental outcomes of pregnancy yielded controversial results.<sup>[14]</sup> In the dimension of psychological effect, husbands' relationship with the pregnant women could act as either a supportive resource or an acute stressor.<sup>[5]</sup> Increasing fathers' knowledge about pregnancy and problems of a pregnant woman is among the tools to acquire their emotional support toward their pregnant wives and can be made possible by the fathers attending educational classes.

**Table 4: Comparison of pregnancy outcomes in two groups**

Group	Mean (SD)	P value
Mothers' hospitalization length (hours)		
Study	25.5 (13.6)	0.10
Control	40.4 (42.9)	
Mothers' weight gain		
Study	14.5 (4.3)	0.63
Control	14.1 (3.2)	
Neonates' hugging time		
Study	61.8 (51.3)	0.01*
Control	112.5 (76.1)	
Kissing neonates		
Study	79.2 (63.00)	0.04*
Control	220.5 (358)	
Breast feeding time		
Study	88 (56.7)	0.04*
Control	124.2 (66.3)	
Neonates' weight		
Study	2960.8 (242)	0.16
Control	3081 (365)	
Neonates' height		
Study	49.2 (1.5)	0.97
Control	49.3 (1.6)	
Neonates' head circumference		
Study	34.3 (2.3)	0.07
Control	353 (1.4)	
Neonates' APGAR		
Study	9.2 (0.05)	0.9
Control	9.1 (0.042)	

\*Comparison of two groups showed a significant difference in time of neonates' hugging, kissing, and beginning of breast feeding

Fletcher *et al.* showed that fathers' participation in classes before delivery was effective in their supportive role and changing their lifestyle.<sup>[15]</sup> Mullany *et al.* showed that education of the women and their husbands together has more positive effects on pregnant women's health behaviors, compared to women's education alone,<sup>[7]</sup> which is consistent with the present study. Kroelinger *et al.* concluded that the feeling of a husband about his wife's pregnancy and the level of his support and care toward his pregnant wife have a notable effect on women's experience from an unwanted pregnancy in such a way that it influences the mothers' decision either to continue or terminate the pregnancy.<sup>[16]</sup>

In the present study, there was a significant difference in hugging, kissing, and start of breast feeding, as they started sooner in the study group compared to control group. Better emotional support of the fathers seems to have caused improvement of mother–neonate relationship and its related outcomes in the study group. The results



of studies of Turan *et al.* and Sahip *et al.* showed that husbands' education led to improvement of exclusive breast feeding and their more appropriate supportive behaviors with women during pregnancy.<sup>[4,8]</sup> Feferbaum, in a literature review, showed that husbands' education and interventions were effective on initiation of neonates' breast feeding.<sup>[9]</sup> Emotional relationship between the mother and the neonate is of great importance concerning emotional dimension and is effective on mother's and neonate's mental and psychological health. Therefore, husbands' education is in direction of achievement to the goal of breast feeding development. Special and close emotional and psychological relationship, which is achieved by breast feeding, between the mother and the neonate not only ties them firmly but also leaves a long-term effect for years in the child's life.

About 80% of the fathers demanded for continuation of the classes after delivery and believed that their participation in taking care of the neonate needs having more knowledge. Fletcher *et al.*<sup>[15]</sup> reported that about 60% of the fathers liked to attend classes after the birth of the child, possibly as having knowledge in relation with changes of lifestyle and participation in neonatal care is achieved better when a challenge is changed to a reality and the child actually exists in the family.

## CONCLUSIONS

Results showed that educational classes held for the pregnant women's husbands during pregnancy can be efficient in promotion of pregnant women's QOL, especially in the dimension of mental health. With regard to cost-effectiveness and efficiency of husbands' attendance in physiologic delivery educational classes, this issue should be considered more seriously.

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