

The impact of Mothers' Group Education on Labor process

Masoomeh Shakeri ^{1*}, Behnaz Molae², Negin Choopani³

¹MSC of midwifery, Faculty member of Zanjan Branch, Islamic Azad University Department. of midwifery, Zanjan Branch, Islamic Azad University, Zanjan, Iran

²Dept. of Obstetrics and Gynecology, Zanjan University of Medical Sciences, Zanjan, Iran

³Student's Research Committee, Tabriz University of Medical Sciences
shakerimasoomeh@Gmail.com

Abstract: Lack of training and readiness of mothers is the leading cause of increased medical interventions and hence maternal and fetal complications. Accordingly, this study aimed to investigate the impact of group education of mothers on the procedure of labor in mothers referred to medical centers in Zanjan in 2014. In this interventional and quasi-experimental study, 280 primipara pregnant women, who were referred to the medical centers of Zanjan in 2013-2014, were selected through stratified cluster sampling method and were randomly assigned in two groups of experimental and control. Eight sessions of 90-minute pregnancy readiness classes were held for the experimental group, while mothers in the control group were received the usual education. A questionnaire was used to collect data in two phases of pre-test and post-test, which then were analyzed using SPSS through chi square, Fischer, and *t*-test. According to the results obtained, both groups had no significant difference in terms of body mass index (BMI), educational level, gestational age, and employment status. In addition, the severity of pain had not a significant difference before the intervention; however, the severity of pain at dilatations 3-4 cm and 7-8 cm was significantly lower in the physiologic labor group than the control group ($p=0.001$). Moreover, the rate of selective cesarean section was lower in the case group than the control group ($p=0.04$). The findings revealed that group education during pregnancy can affect the severity of pain and the rate of selective cesarean section in mothers. Widespread holding of pregnancy readiness courses will improve the health quality indicators of mothers. [Shakeri M. **The impact of Mothers' Group Education on Labor process.** *Researcher* 2014;6(6):60-63]. (ISSN: 1553-9865). <http://www.sciencepub.net/researcher>. 12

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1. Introduction

Pregnancy and labor are two natural phenomena which require support and accompaniment of mother, rather than medicinal intervention (Domingues,2008). Just as adolescence and menopause, pregnancy is a crucial period of a woman's life during which she should be ready for a better acceptance of her maternal role (Shakeri,2013). Life begins prior to the birth and an even growth of children is closely related to the physical and mental health of mothers during pregnancy (fear and anxiety cause the release of stress hormones and the failure of progress in labor (Naghizadeh,2011). Ignorance and fear of unknowns of pregnancy result in anxiety in pregnant mothers (Jackson,2008). Prenatal education is an important factor effective on mortality and on reduction of perinatal complications (Rostampey,2010). Prenatal education in various approaches is a dynamic process in which parents acquire information about physical and mental changes during pregnancy, labor, and supportive methods during labor. These educations improve the knowledge of mother about pregnancy, labor, infant care, reduction of drug consumption during labor, and pain relief. Furthermore, they provide skills for tolerating labor pain through

physical readiness such as relaxation and specific exercises and help mothers to experience a pleasant labor (Campell,2006).

Performance of labor is the most sensitive and important services of the health care systems in all societies and since every service should be provided in a proper, low-cost form, and with the lowest mental and physical complications, cesarean delivery as a labor method is not an exception. In Faramarzi's study (1999), ignorance of cesarean section complications, negative attitude towards normal delivery, attribution of incorrect rumors and complications to normal labor, and promotion of cesarean section were stated as the reasons for tendencies toward cesarean section. Education of health behaviors and proper approaches during pregnancy may change and improve behaviors through substitution of improper behaviors with proper and healthy ones (Besharati,2011). The value of these health educational programs depends on their rate of effectiveness (Mackey,2003). Certain educations are provided routinely in medical centers during the anticipated cares of mothers. In Iran, the provided amount of education is not favorable in comparison with the standard programs of care during pregnancy (Longer,1998). Accordingly, this study

aimed to investigate the impact of group education of mothers on the procedure of labor in mothers referred to hospitals in Zanjan in 2013-2014.

2. Materials and Methods

In this interventional, quasi-experimental study, 280 pregnant women who referred to the medical centers of Zanjan for receiving prenatal care in 2010-2011 and had the inclusion criteria were selected through the stratified cluster method. To this end, Zanjan was divided into four zones of north, south, east, and west, and then 2 centers were randomly chosen in each zone and then were randomly assigned in the experimental and control groups.

The inclusion criteria were primiparity, gestational age of 18-24 weeks, literacy, Iranian and fluent in Farsi, no history or existence of known disease, and lack of bleeding history, abortion, multiparity, cerclage, ectopic pregnancy, and history of infertility. The exclusion criteria included any type of a specific problem or disease during pregnancy such as bleedings, multiparity, premature rupture of membranes, preeclampsia, diabetes, and absence in the sessions. The subjects were randomly divided into two groups of experimental and control. The data collecting instruments included a demographic questionnaire and the visual analogue scale of pain (VAS) (Percival, 2000). The validity of the data collecting tools were identified through the content validity method and the reliability of the VAS through the equivalence test; so that the test was performed by the researcher and the midwife in charge of hospital on 10 mothers and a correlation coefficient of 0.94 was obtained. The questionnaires containing demographic characteristics and the inclusion and exclusion criteria were filled by a trained midwife for each subject after which the eligible subjects were

enrolled in the study. The classes were held with 12 persons for 8 sessions, each for 90 minutes in three parts. Through lecture, question and answer, group discussion, videos, compact disc, leaflet, and pamphlet, the following topics were provided to mothers by a trained midwife in each session; natural changes during pregnancy, prenatal care (proper nutrition, physical activity, and proper sexual behavior), natural labor procedure, infant care, risk factors, proper cooperation during delivery, and right and wrong views about pregnancy and labor. The questionnaires were filled six weeks after educational intervention in the two groups of experimental and control. The data were analyzed using descriptive statistics including frequency distribution tables, central indices, and dispersion and inferential statistics such as ANOVA, independent *t*, and chi square tests at the significance level of 0.05.

3. Findings

The groups were not significantly different in terms of body mass index (BMI), educational level, gestational age, and employment status. The results of ANOVA performed to compare the difference of the means of pain severity based on VAS scores in natural and common labor in the phase of admittance showed that the mean of pain severity at enrolment (prior to intervention) had no significant difference between the two groups and all subjects were included in the study with a same level of pain; however, the difference of pain severity in these methods was significant in dilations 3-4 cm and 7-8 cm (Table 2). The results of this study also showed that the rate of selective cesarean section was significantly lower in the trained mothers (37% of all cesarean sections) than the untrained group ($p=0.04$) (Table 2).

Table 1: Comparison of the severity of pain in different phases of active labor in primipara women referred to hospitals of Zanjan, separately for the experimental and control groups

Variable	Experimental group	Control group	<i>p</i> -value
Before intervention	3.02 ± 1.02	3.17 ± 1.12	0.124
3-4 cm	6.89 ± 1.87	7.78 ± 0.78	0.03
7-8 cm	7.08 ± 0.91	9.07 ± 0.49	0.001

Table 2: Comparison of the rate of cesarean section due to obstetric reasons and selective cesarean section in primipara women referred to hospitals of Zanjan, separately for the experimental and control groups

Variable	Experimental group	Control group	<i>p</i> -value
Mother request	43 (37%)	49 (42%)	0.04
Obstetric reasons	74 (63%)	68 (58%)	0.112

4. Discussion

Different studies have been carried out on the impact of education on the nutritional behavior of pregnant women; the results of the present study showed that the mean severity of pain feeling was different at various hours of delivery in the experimental and control groups; this difference was significant according to the Mann-Whitney test. Percival showed in their study that from the first half-hour until the end of the sixth half-hour in the first phase of labor, the severity of pain was in the range of low and moderate pain in the trained labor group and in the range of moderate to severe in the common method (Percival, 2000). Ignorance and fear of unknowns of pregnancy result in anxiety in pregnant mothers (Javadnoori, 2008). The induced anxiety during labor leads to an increased pain severity and a decreased satisfaction of mothers (Naghizadeh, 2011). It seems that increasing knowledge of mother about the process of delivery may improve her cooperation during labor and reduce her anxiety (Samieizadeh, 2011). Gasquet believes that performance of the recommended exercises can result in reduced anxiety and hence improved release of endorphin and declined release of adrenalin which is a crucial factor in acceleration of labor phases (Khorsandi, 2008). According to the results, the rate of selective cesarean section was significantly decreased in the experimental group compared with the control group ($p=0.04$).

Some reasons such as the tendency of mothers toward cesarean section, fear of legal issues have changed the nature of cesarean section to a tool for escaping the pain of labor, regardless of its complications and negative aspects (Samieizadeh, 2011). Mehdizadeh *et al.* showed that the rate of cesarean section in the trained group was 15% lower than the control group; they also demonstrated that the active phase of labor was shorter in the trained group than the control group (Mehdizadeh, 2004). researches that readiness classes and in general, psychological support of mothers during labor reduce the rate of cesarean section up to ¼. Increased knowledge, exercises, and physical activity reduce failure to progress and mal-presentation (Hodnett, 2002).

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Correspondence to:

Masoomeh Shakeri

Faculty member of Zanjan Branch, Islamic Azad University Department. of midwifery, Zanjan Branch, Islamic Azad University, Zanjan, Iran
shakerimasoomeh@gmail.com

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