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Health Sector Evolution Plan and propagating natural childbirth in Iran.

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ABSTRACT

Natural childbirth is the best way to bring pregnancy to an end and deliver a healthy baby but its rate in the recent years is going to decrease in many countries and specifically in the developing countries such as Iran. Health Sector Evolution Plan studies this grave issue with an aim of improving the mother-child health indicator throughout reducing the rate of cesarean delivery from its first day of implementation on May 5th, 2014. This study is carried out on 2016-17 with an aim of stating the results out of implementing the natural child birth propagation plan under the Health Sector Evolution Plan in Iran with an emphasis on hospitals which are affiliated to Isfahan and Shar-e-Kord Universities of Medical Sciences in 2016-17. The present study is carried out by two review and descriptive studies at first through search in valid scientific internet sites and then by going to centers for hospital statistics in the two cities of Isfahan and Shahr-e-Kord and obtaining the relevant statistics. Findings indicate that Health Sector Evolution Plan has achieved resounding results achievements by performing the training programs for mothers, empowering service providers, devise uniform standards for human resources, equipment, physical space, devising standards for offering midwifery and natural delivery services, and propagating natural delivery. In order to continue and perpetuate the achievements in this plan in elevating the natural delivery factor win the cooperation of the experts, amend the codes, amend instructions, inter-sector collaborations, culture-building, and raising awareness, standardization of equipment and accessories should be noted in this plan by health sector managers in order to resolve challenges.

Keywords: Health Sector Evolution Plan, natural childbirth, hospital.

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INTRODUCTION

Pregnancy is a physiological phenomenon and its termination that is delivery is an event which is followed by scare and anxiety (1). Natural childbirth in most cases is recognized as the best type of delivery and carry out a caesarean section surgery is limited to cases in which delivery through natural canal is impossible and/or brings dangers for the fetus or mother while vaginal delivery leads to a reduction in becoming bedridden in neonatal intensive care unit (NICU) and a reduction in infant oxygen deprivation (2). Complications following caesarean section surgery are by far more than vaginal delivery and the complications of anesthesia such as aspiration, hypotension, headache, bleeding, uterine atony, complications of blood transfusion, post-surgery infection, surgical infections such as placenta previa and abnormal pelvic adhesions, injuries which are stricken to urinary and digestive tract following the caesarean section surgery for mothers (2).

Although in the previous centuries caesarean section had a key role in reducing the child delivery mortality rate in both mothers and the foeti but today the point of concern is the high rate of caesarean section surgeries. (1) In the recent decade carry out child delivery through caesarean section has increased significantly and in some parts of the world it has reached to more than %50 out of total deliveries (4). This increase has not only led to no reduction in mortality and pathogeny rates, but also has increased the costs of care and has increased the risk of jeopardizing mothers' health, and slows down the healing process (5). Comparing women's quality of life after vaginal delivery with those of cesarean section in Hamedan University of Medical Sciences indicated that the quality of life in women who undergo vaginal delivery is significantly higher than the caesarean surgery group. Findings of a study indicate that delivery by cesarean section is followed by an increased risk of %50 than delivery by cesarean section for the infant mortality rate. Also, cesarean section leads to a delay in the infant feeding and the type of infant feeding and leads to the maximal rate of being underweight at delivery time in the infants whom are born through cesarean section (6).

In a study which was carried out in Nigeria the main reasons for performing cesarean section includes: primary infertility, high first birth age, a history of recurrent miscarriages, a history of natural child delivery, and the infant brain damage in the previous delivery (7). In Iran the reason for choosing cesarean section by mothers consist in: fear for the natural child delivery pain, and encouraging women to undergo cesarean section by doctors, the status of midwives in the affair of consultation pales into insignificance, training and performing natural childbirth, false beliefs about the dominance of cesarean section, unawareness of its harmful results, negative attitude, and the existence of rumors and its harmful complications in comparison with natural child delivery. (8 & 9) .

Today we are facing an increasingly widespread statistics on cesarean section in the majority of countries all over the world. Like most of countries, the rate of childe delivery by cesarean section has an upsurge as well. A Demographic and Health Survey Research which was carried out in 2000 in Iran reported the rate of %25 for cesarean section (10). This rate in 2005 reached %40.7. More than half of this rate of delivery by cesarean section (i.e. %52) was performed in Tehran. And from among this rate of %52, %64 is being carried out in private hospitals (11). World Health Organization (WHO), has estimated the annual expected rate of cesarean section as %10 and has estimated this rate for the developing countries as %15 (12) while the rate of cesarean section in Iran is higher than its rate in the developed countries such as the US (%33), and England (%32). The rate of cesarean section in the European countries is %23 and in the Eastern Mediterranean Region is %16 which is so higher than the rate of cesarean section in Iran. Statistics indicate that Iran after Brazil, Cyprus, and Columbia is the fourth country in terms of the number of cesarean section (13). In this vein the Health Sector Evolution Plan is one of the main and most serious deeds during the recent years which has paid serious attention to reducing the rate of cesarean section. One of the eight treatment plans in the Health Sector Evolution Plan is the increase in natural child delivery parallel to the natural child delivery propagation. This plan was executed in the hospitals all over the country in the date of May 5th, 2014. According to this plan the whole hospitals are bound to reduce the rate of cesarean section by %2.5 per each three months in a way that at the end of first year it reduces to the base rate of %10. According to the plan for the propagation of natural child birth the whole hospitals are bound to reduce the rate of cesarean sections and for encouraging mothers to perform natural child birth the whole hospitals and reduce the costs which was arranged for mothers to be paid out of their own pockets natural child birth will be done in state hospitals for free and the patient pays no cost for it. Encouraging the state child birth centers and the service providers

to pave the way for using the delivery pain-reducing methods such as pharmaceutical and non-pharmaceutical methods, propagating the culture of naturalness of pregnancy and delivery procedures or holding child delivery preparatory classes for expectant mothers and empowering the service providers are among the extra deeds which are performed throughout the plan for propagating natural childbirth. The key approaches for elevating the quality of natural childbirth in this plan consists in training mothers, empowering the service providers, devising manpower standards, equipment, physical space, devising standards for offering midwifery and natural child birth services and propagating natural child birth. Also, in order to making the delivery process pleasant and protecting the personal space of expectant mothers and preparing the situation of the presence of a trained attendant beside a mother state hospitals are bound to prepare the physical conditions of the delivery room in the form of one-man units with a one-to-one care throughout pregnancy. According to this instruction for optimizing the physical space of delivery room the hospitals which performing cesarean section a budget will be dedicated to build a one-man unit in the delivery ward (14). This plan is parallel to propagating natural childbirth and the modern demographic policies and achievements such as reducing cesarean section by %10 in the country, reducing the complications of cesarean section for the mother and the child, encouraging natural childbirth by expanding painless delivery, making natural childbirth for free in state hospitals, rebuilding the delivery ward by building special spaces for making the natural delivery atmosphere pleasant and increasing the birth rate (15). This study by considering the influence of the above-said deeds which were executed throughout the natural childbirth propagation plan under Health Sector Evolution Plan in Iran to scrutinize the results of deeds.

METHOD

The present study was carried out through two methods of survey and descriptive methods in 2015-16. The first step was extracted through searching in valid scientific internet sites for the studies which are relevant to the subject of the research. The second step was performed followed by extra studies in the two universities accessible to researchers in Isfahan and Shahr-e-Kord to study the factors involved in process variation and by referring to the centers for hospital statistics for this plan the required data was taken. The existing acquired statistics were juxtaposed with the findings of the first study in the first step of the research. Concerning the statistics of the similar studies which weren't obtained due to recency of the plan, findings were mentioned.

RESULTS

Findings indicated that concurrent to the establishment of the Health Sector Evolution Plan in Iran and performing the natural childbirth propagation plan the rate of cesarean section reduced in the first quarter of the year 1392 Of Persian calendar (21st March, 2013 to June 21st, 2013) . For encouraging mothers to perform natural childbirth and reducing the cost which was going to be paid out of their own pockets natural child birth will be done in state hospitals for free. Concerning the analysis of a benefit-cost rate (BCR), for natural childbirth in comparison with cesarean section parallel to the natural childbirth propagation plan in the hospitals of the city Isfahan and Shahid Beheshti Medical Center in Isfahan the ratio of cost-to-benefit for natural childbirth and the cesarean section in the year 2013-14 were 1.35 and 1.22 respectively. According to statistics and the assessment factors of the Treatment Evolution Plan the ratio of delivery by cesarean section to the total rate of deliveries is as come in the following table:

Factor	Source	2013-14		First quarter of Treatment Evolution Plan since May 5 th , 2014 to August 6 th , 2014	
Ratio of delivery by cesarean section to the total rate of deliveries	Mother and child system	State hospitals	%37	State hospitals	%32
		Private hospital	%88	Private hospital	%87
		Charity Institution	%70	Charity institution	%72
		Social security organization	%48	Social security Organization	%48
		The armed forces	%65	The armed forces	%65
		Other	%85	Other	%85

The statistical results indicate that the percentage of cesarean section in the first quarter of the Health Sector Evolution Plan in the state hospitals is reduced by %5 and in private hospitals it is reduced by %1. In whole, the most rate of cesarean section deliveries is related to private hospitals and the least is related to state hospitals. The rest of hospitals including the Social Security Organization Charity Institute, The armed forces hospitals, and others in this plan didn't agree with this plan which this involves more study and scrutinization and designing the necessary measures in this respect.

The results indicate that implementing the Health Sector Evolution Plan has led by average to a reduction in the rate of cesarean section surgeries by the rate of %8.5 in hospitals affiliated to Isfahan University. The rate of these variations in several hospitals is different in a way that the maximal rate of variations was observed in Al-Zahra Hospital which was equivalent to %23 reduction in its ratio in comparison with the year 2014-15. The Shahid Montazeri Hospital in Nadjafabad with %19.4 and The Isabnemaryam Hospital with %14 reduction in comparison with the previous year ranked second and third respectively. In the statistics which is obtained out of HIS system The Al-Zahra Training Hospital concerning lack of performing cesarean section divided by the reasons for performing the cesarean section surgery in comparison with the two years of 2013-14 and 2014-15 prior to and after the Health Sector Evolution Plan among the reasons for performing the cesarean section surgery including previous cesarean section, fetal distress, eclampsia, non-progression of delivery, unnatural form of birth, background disease, multiplicity of birth, placental abruption, microsomia, infertility, placenta previa, and elective cesarean delivery in the year 2014-15 in comparison with the year 2013-14 has a progressive trend. Also, the reasons for fetal distress, non-progression of delivery, background disease, eclampsia/ pre-eclampsia, placental abruption, microsomia, and infertility had a regressive trend and the reasons for unnatural form of birth and placenta previa were remained unchanged. In Shar-e-Kord University of Medical Sciences the statistical percent numbers for cesarean section at the end of the year 2013 and the beginning of 2014 (prior to the commencement of the Health Evolution Plan), was %44.5 which this number was %44.5, %44.91, %40.13, %40.12 respectively at the end of the years 2013 and the beginning of 2014 (i.e. the commencement of the Health Evolution Plan) to the end of the year 2015 and the beginning of 2016 respectively which indicates the regressive trend in the number of cesarean section cases after the complete establishment of this plan which is indicative of the success of this plan beside the measures which were taken by executives in this province.

DISCUSSION

Findings of the research indicate that the Health Evolution Plan after executing the plan for propagating the natural childbirth has achieved a relative success in achieving the goal. The choices of encouragement and training the mothers, a reduction in paying out of one's own pocket, and the gratuitousness of natural delivery in state hospitals, optimization of delivery wards in hospitals, encouraging the state centers and the service providers to provide for using the delivery pain-reducing methods such as pharmaceutical and non-pharmaceutical methods, propagating the culture of naturalness of pregnancy and delivery procedures or holding child delivery preparatory classes for expectant mothers and empowering the service providers are among the reasons for the relative success of this plan in the short term since the mentioned factors are contributing a lot to the occurrence of a natural delivery. Bagheri et al. stated that multiple factors are influencing the selection of the type of delivery which some of them are facilitating for the cesarean section such as pain, unfavorable experience from previous delivery, attitudes of associates, and some are facilitating the natural delivery such as belief in good deliverability of expectant mothers, positive past experience, and the positive attitude of the expectant mother toward natural delivery (16) which the correct training for mothers and service providers lead to a natural delivery. Also, the measures by the government concerning paving the way for methods to reduce the delivery pain lead to the selection of natural delivery for which Abitol in his/her study indicated that %60 of women whose former deliveries were through cesarean section in the next delivery were inclined to undergo natural delivery and the reasons for the rejection of the rest %40 of women were the comfort in the selective cesarean section and fear from excessive and long pain and also their reason for selecting natural delivery by %60 of them were fear, from surgery and concern for the danger of cesarean section for themselves or for their infants (17). Chong in his/her study in Singapore stated that the more the awareness of individuals, the more diverse were their attitudes toward natural delivery and the cesarean section and they rarely selected the cesarean section (18). Also, Najjar Kalayi in his/her study indicated that mothers had negative attitudes toward natural delivery (19 for which it is necessary to build culture, provide for pain-reducing methods for natural delivery, holding preparatory classes

for delivery to change those attitudes toward natural delivery into positive. On the other hand, gratuitousness of natural delivery and reducing the rate for paying out of one's own pocket are among the reasons for the inclination of mothers toward natural delivery. The inclination of the patient his/her collaboration beside the legal and security causes, monetary aspect and its significance, were stated as the factors influencing the selection of the type of delivery from doctors' point of view. In a study by Naeeni et al. it was stated that (20) the attitude and the skill of service providers and propagating the culture of delivery among them contribute to performing the natural delivery unless they make the medical indications in performing the cesarean section inevitable since the main reasons for selecting natural delivery are its lesser complications, faster cure, less expensiveness in comparison with cesarean section, health of the baby, and fear from anesthesia and also the main reason for selecting the cesarean section by mothers were fear from delivery pain, doctor's advice, and the experience of the previous cesarean section (21). In this vein, counseling services prior to delivery by the state and the augmentation of skills and awareness by the service providers themselves will be too fruitful since as Dobson indicated in his/her study in England mothers need at least forty hours of counseling for making a sound decision in choosing a correct method of delivery during the pregnancy period and lots of counselors prefer cesarean section to natural delivery for no definite reason and even lots of gynecologists and midwifery experts in time of their own delivery want to choose the cesarean section (22). Safari Faramani et al. in their study of the statistics of cesarean section in Kerman University of Medical Sciences in the first half of the year 2014-15 of Persian calendar reported a harsh reduction in the cesarean section factor and recommended to insert it among the factors for monitoring the evaluation of plans for reducing the cesarean section surgeries and reaching an optimal level and reducing the cases of cesarean section in the recent decades (23). Beside its achievements, the Evolution Plan needs more planning cases for success in this project. As Godarzi et al. stated in their study on the process of implementing the plan for propagating natural delivery in one hundred and thirty (130) hospitals from fifty seven (57) universities, Universities of medical sciences and healthcare services in Iran, after the passage of six months from the commencement of the Plan they stated that from among the cases aspects which were studied were in sum on the relatively proper status. Noting that the whole above-said evidence and proofs are indicative of the high rate of cesarean section in Iran which is higher than the global average, but also higher than the majority of the Middle East and the developing countries and by noting that the government and the Ministry of Health were able to make the delivery gratis but they weren't successful in increasing the number of natural deliveries significantly in comparison with the past. Thus, it involves more planning (24). Kohan et al. in studying the achievements and challenges of the plan for propagating natural delivery stated that not only the elevation and propagation of natural delivery is important but trying to build a culture for delivery should be noted as well that in this vein the two factors of making the space of the delivery room pleasant and the existence of no delivery room with the standards of the birth center in the majority of hospitals for the low-stakes child birth and the Health Sector Evolution Plan was also unsuccessful in operating these centers. The second factor in this context is the human resource and specifically the existence of professional and ethically-committed midwife since by shifting the mothers into state hospitals and people's insisting on natural delivery it is needed to elevate the number of midwives and the skills of midwifery. But due to the miscalculations which were done and recommending ten midwives per one thousands of deliveries it led to the non-employment of midwives and their redundancy in hospital shifts for which we have practically an improper number of recruitment of midwives for mothers which leads to the reduction in the quality of delivery and a reduction in the inclination of mothers for the next deliveries and the culture of natural delivery. Thus, an all-out planning should be made for elevating the quantity of natural delivery (25).

Although in case of the complete implementation of this plan and correct instructions and the continuation of activities including increasing the awareness of mothers, service providers, culture-building, increase the skills of service providers, government support for providing the required facilities, reduction of costs for natural delivery and correct policymaking this plan is expected to improve and it is necessary to win the cooperation of experts, amend the codes, amend the instructions, inter-sectoral collaborations, culture-building, and awareness-raising, standardization of facilities and supplies, in this plan should be taken into consideration by managers to resolve the challenges.

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