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Evaluation of Satisfaction with the Health System Transformation Plan in the Seventh Axis of Promoting Natural Childbirth

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Abstract

***Background and Objective*:** The rate of cesarean section has been increasing in many regions of the world, including Iran in recent years. Therefore, the seventh axis of the health system development plan was dedicated to promoting natural childbirth at hospitals of Iran to improve the health of mothers and infants and reduce the rate of cesarean section. The present study aimed to analyze the policy gap of the health system development plan in the axis of promoting natural childbirth.

Material and Methods: This cross-sectional, descriptive-analytical study was conducted in 384 employees, medical staff and physicians in the field of education, health and treatment at Golestan University of Medical Sciences using simple random sampling. The data collection tool included a 35-item researcher-made questionnaire. After confirmation of its validity by supervisors and advisors, its reliability was obtained to be 0.84 by Cronbach's alpha test, indicating the reliability of the questionnaire. We distributed and collected the questionnaires in 6 months from the September to the December of 2020, and analyzed data using SPSS 22.

Results: In the seventh axis of the health system development plan, there was a gap of -0.004 between the current and desired status, indicating that the gap between the current and desired status was close to the center axis and in the field of cooperation in the statistical population of the study.

Conclusion: Implementation of a plan to promote natural childbirth was effective in reducing the rate of cesarean section and encouraging pregnant mothers to give natural childbirth but the effectiveness was not enough to achieve the goals of the seventh axis of the plan. Therefore, the factors, which caused the lack of cooperation between the executive departments of the University of Medical Sciences, must be eliminated for creating effectiveness.

Keywords: Policy Making [MeSH]; Health Systems Plans [MeSH]; Natural Childbirth [MeSH]

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Highlights

- In recent years, in many parts of the world, including our country, the rate of cesarean section has been increasing.
- The seventh axis of the health system was dedicated to promoting natural childbirth and infertility.
- The existence of a gap between the current and favorable situation in the seventh axis of the health system development plan from the participants' point of view was shown.

Introduction

Policy-making as a main function of the health system development is the most challenging field of development and promotion of all or part of the health system (1). Childbirth is a basic concept in reproductive health and the method of childbirth in medical centers is particularly important around the world. Delivery can be usually done with the cooperation of mothers and people, but it is performed by cesarean section in a few cases in cases of threat to the life or health of mother and fetus (2).

Natural childbirth creates important physiological adaptations to life after childbirth and the mother recovers sooner. Furthermore, the health of mother and infant is less at risk than having a cesarean section. Also, subsequent deliveries will take place in a shorter process and with a very low risk for mothers and children (3). In recent years, the rate of cesarean section has been increasing in many regions of the world, including Iran, and it has high costs and also carries a very high risk for mothers and infants (4). Furthermore, the World Health Organization has announced that the acceptable rate of cesarean section is 10-15% of deliveries. Following the increase of this operation in Iran, the custodians of Iran's health system have implemented the Promoting Natural Childbirth Program (PNCP) (5).

The seventh axis of the first phase of this plan was dedicated to promoting natural childbirth and infertility. This plan was implemented to promote maternal and infant health and reduce the rate of cesarean section in Iran's hospitals. Therefore, the most appropriate financial strategy was applied to control the increasing trend of cesarean section in Iran (5, 7). "Creating a culture for natural childbirth" followed by "strong and committed leadership of the Ministry of Health" and "empowerment for natural childbirth" is the most valuable approach to the successful implementation of PNCP (6, 9). Increasing natural childbirth and reducing cesarean section are the ways to improve the health index of mothers and infants to achieve goals of the Millennium Development Goals so that the health system development plan and the Promoting Natural Childbirth Program (PNCP) were developed and implemented in Iran. However, the promotion of natural childbirth in the health system development plan, which was a timely policy, was unfortunately marginalized by the performance of private hospitals so that such hospitals began to create the wrong culture about the cesarean section instead of helping to promote natural childbirth by increasing the tariff and bringing it closer to cesarean section. Furthermore, this delivery is 3-4 times more troublesome than cesarean section according to physicians' views (10).

Afshari et al. (2018) examined the impact of the implementation of health care reform plan in a hospital and found that due to the failure of the plan to reduce the rate of elective cesarean section, the plan needed more effective policies to implement and two important factors in implementing the plan included making the delivery room more comfortable according to standards of the delivery center and increasing the human resources and obstetricians; hence, there was a need for a comprehensive plan to promote natural childbirth (11).

Mossadegh rad (2020) studied the effect of the promoting natural childbirth program of the health system development plan on the rate of cesarean section in Iran and found that the cesarean section index decreased in Iran immediately after the implementation of the program to promote natural childbirth by 6% and then remained at the same level. This program has been effective in reducing

cesarean section at some hospitals, but has had an increasing effect on the cesarean section in some hospitals (4). In a study by Fouladi et al. (2017), there was not any significant difference between reducing the rate of the cesarean section before and after the implementation of the development plan. The implementation of the health system development plan has led to a reduction in the rate of cesarean section at the hospitals but the rate of reduction did not correspond to the projected goals (2).

Asadi et al. (2019) examined the impact of the development program on maternal and child health indices in developing countries, including Iran, and found that the implementation of childbirth development by increasing the rate of natural childbirth affected the overall indices of maternal and child health. It also reduced cesarean section mortality in infants and mothers (12).

Piroozi et al. (2016) also examined the success rate of the promoting natural childbirth program of the health system development plan and reported that the rate of cesarean section decreased by 10% in the first year of the plan compared to the average of the previous year. Their results also indicated the promotion of maternal and neonatal health indices (5). A review of studies indicated the existence of a gap in the seventh axis (promoting natural childbirth) of the health system development plan. Based on the above-mentioned bases and the need to pay attention to the issue and analyze the existing gap, the present study aimed to achieve the following purpose: How is the gap between the current and expected status in the seventh axis of the health system development plan (promoting natural childbirth) at Golestan University of Medical Sciences?

Materials and Methods

Study design: The present study was descriptive-analytical and cross-sectional. The statistical population of this study was selected from the medical, educational and administrative staff of medical centers of Golestan University of Medical Sciences (Sayad Shirazi Hospital, 5 Azar and Taleghani).

Sample size: We selected 384 people include employees, medical staff, and physicians in the field of education, health, and treatment as inclusion criteria at the University of Science Golestan province by stratified sampling with proportional allocation to measure the achievement of plan objectives according to the statistical population, and the use of Cochran's Sample Size Formula.

That the service employees and undergraduate education, People under the age of twenty and lack of employment in the executive period of the health system development plan are among the exclusion criteria in this study.

$$n = \frac{Nz^2pq}{Nd^2 + z^2pq}$$

Data allocation tools: To conduct this research a researcher-made questionnaire was used to assess the current situation that for this purpose, the ordinal scale is used in the form of fifty Likerts, which include very low, low, relatively acceptable, high and very high. In addition to detecting the presence or absence of an adjective, the intensity and weakness of the adjective can be measured with an ordinal scale. The questionnaire designed for this research consists of two parts; the first part consists of four questions by which the demographic information of the respondents has been extracted. The second part examines the specialized points about seventh axis. In this section of the questions, each respondent expresses his / her opinion by agreeing or disagreeing in the form of a Likert scale.

In this study, a part of a 35-item questionnaire that examines specialized points about the seventh axis is given (Table 2). In this survey after confirmation of its validity by the supervisors, advisors and ten related specialist, its reliability was estimated to be 0.84 by Cronbach's alpha test, indicating the reliability of the questionnaire. We distributed and collected the questionnaires in 6 months from the September to the December of 2020.

Data analysis: Data were analyzed using SPSS22, as well as the Kolmogorov-Smirnov test, Cronbach's alpha test and one-sample t-test. The respondents' demographic characteristics such as age, gender and level of education were described using descriptive statistics indicators and the results are shown in the form of frequency distribution tables. In this regard, we first classified the questions about the seventh axis of health system development plan (promoting natural childbirth) into two groups, namely the perceptions (current status) and expectations (favorable status) to review and answer the research question, and we then examined the research questions. We also used the proposed framework of the research process of the Public Issue Management (2014) book to study and analyze the gap between the current and expected favorable status in the seventh axis. Savage model (1991) is a conceptual model of research, based on this model, the extent of the gap between expected programs and policies in the seventh axis of the health system transformation plan (promotion of natural childbirth) with the current situation and what has been implemented in practice (Figure 1). Based on this model, it is determined in which of the four parts of this model the gap is located, if it is placed in the cooperation part, it shows that the gap is low to achieve the expected goals with the current situation and therefore the amount should be Cooperation between the units implementing the project should be strengthened and barriers to non-cooperation should be removed. If it is included in the participation section, it shows that due to the favorable participation of different units of the province's educational and medical centers, there is no gap between the realization of the expected goals and the current situation. If it is placed in the defense section, it shows that the gap in the realization of the expected goals is large with the current situation, and as a result, the system reacts and takes the defense option, and if it is placed in the monitoring section, It shows that the gap between the achievement of the expected goals and the current situation is small, and as a result, the supervisory units in the University of Medical Sciences should have more supervision over the units implementing the plan. This model indicated the extent of the gap between the current and expected status based on two components, namely the key stakeholders' coordination with health system development policies and stakeholders' opposition to health system development policies, the extent of the gap.

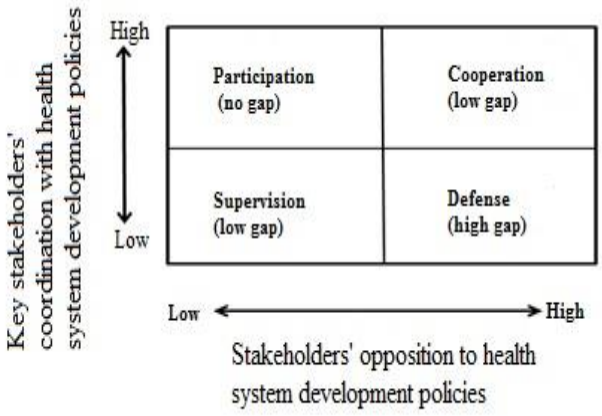


Figure 1. Conceptual model of research (adapted from Savage, 1991) (6)

Results

We initially examined the respondents' demographic characteristics (Table 1). Based on the calculations obtained from the stratified sampling method, according to the occupational categories, 68% of therapeutic disciplines, 27% of the administrative disciplines, 2% of the educational and therapeutic disciplines and 3% of the educational disciplines, respectively 260, 104, 7 and 13 people according to the Table 1 were selected as a sample.

Out of 384 statistical samples, 47.92% of the respondents were male and 52.08% were female. The findings of the table show that out of a total of 384 statistical samples, 17.18% are people between 20 to 30 years old, 48.69% are 31 to 40 years old, 30.22% are respondents between 41 to 50 years old and 3.91% are 50 years or older. Out of a total of 384 statistical samples, 80.99% are bachelors, 16.41% are masters and 2.60% are specialists and the frequency of occupational category was 67.71% in the medical field, 27.08% in the administrative field, 1.83% in the

educational / therapeutic field and 3.38% in the educational field.

We then used the Kolmogorov-Smirnov test to examine the normality of the variables and the results indicated that the significance level of all variables in this study is above 0.05 (in the range 0.107) so the variables were normal; hence, we utilize parametric tests (One-Sample T-Test) to analyze the data Therefore, we identified the gap between the current and favorable status of the seventh axis and determined the gap. At the second stage, we examined and estimated the significant difference between the current and favorable status of the seventh axis of the health system development plan (promoting natural childbirth) using the t-test (Table 3).

Table 1. The respondents' demographic characteristics

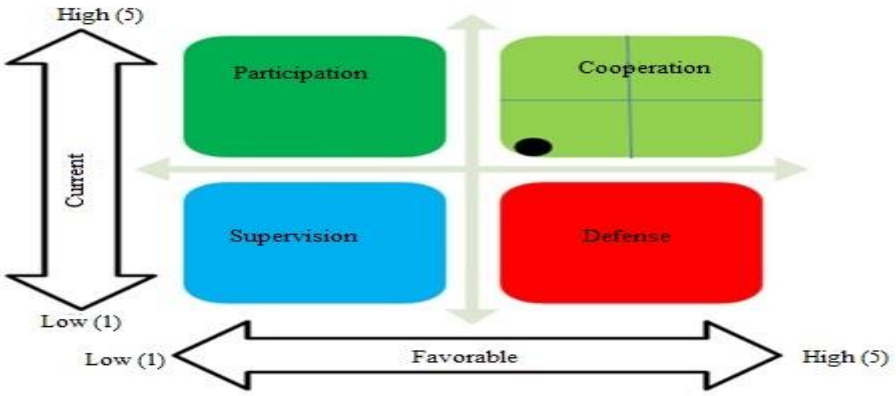
Variable		Prevalence (%)	Variable		Prevalence (%)
Gender	Male	184 (47.92)	Education level	Bachelor	311 (80.99)
	Female	200 (52.08)		Master	63 (16.41)
	Total	384		Specialist	10 (2.60)
Age	20-30	66 (17.18)		Total	384
	31-40	187 (48.69)	Occupational category	Medical group	260 (67.71)
	41-50	116 (30.22)		Administrative	104 (27.08)
	50 and over	15 (3.91)		Education/medical	7 (1.83)
				Education	13 (3.38)
	Total	384		Total	384

Table 2. The seventh axis gap

Status	Item	Mean	Mean of total	Gap
Current	How much change do you feel in the presentation and implementation of the health system development plan to promote natural childbirth at hospitals affiliated with the Ministry of Health and Medical Education?	3.09	3.06	-0.004
	To what extent are the health system development plan and promotion of natural childbirth implemented at hospitals affiliated with the Ministry of Health and Medical Education for all groups of people?	3.12		
	How many specialized and efficient personnel are permanently present at hospitals affiliated with the Ministry of Health and Medical Education to perform natural deliveries and provide medical and treatment services?	2.97		
Favorable	To what extent is the level of satisfaction with the services provided at hospitals according to the health system development plan to promote natural childbirth?	3.01	3.064	
	To what extent do you agree with the following statement? "The health system development plan and the promoting natural childbirth program are still supporting and implementing at hospitals affiliated with the Ministry of Health and Medical Education."	3.21		
	To what extent do you agree with the implementation of the health system development plan to promote natural childbirth at hospitals affiliated with the Ministry of Health and Medical Education?	2.97		

According to the results and the study of the mean current and favorable status, the seventh axis of promoting natural childbirth program is equal to -0.004 (the reliability coefficient of 0.95 and the *P*-value= 0.000) in the health system development plan (Table 2), indicating a gap between the current and favorable status close to the middle axis in the cooperation in the statistical population. If the factors, which cause non-cooperation between the executive departments, are eliminated, the gap between the current and favorable status will be eliminated.

Diagram 1: The gap between the current and favorable status in the seventh axis (promoting natural childbirth)



1- Participation: It shows that the gap between the achievement of the expected goals and the current situation is small, and as a result, the level of cooperation between the units implementing the project should be strengthened and barriers to non-cooperation should be removed.

2- coopration: It shows that due to the favorable participation of different units of medical training centers in the province, there is no gap between achieving the expected goals and the current situation.

3- supervision: The gap between the expected goals and the current situation is large, and as a result, the system reacts and takes the option of defense.

4- defense: Shows that the gap between the achievement of the expected goals and the current situation is small and as a result, the supervisory units in the University of Medical Sciences should have more supervision over the units implementing the plan.

We then examined the current and favorable status in the seventh axis for promoting natural childbirth and used the independent t-test due to the data normality to evaluate the current and favorable status of the gap (Table 3)

Table 3. The evaluation of the current and favorable status of the seventh axis: Promoting natural childbirth

Axis	A brief description	Standard deviation	Mean difference	df	T-value	Significance level
Seventh	Promoting natural childbirth	0.767	-0.062	381	-1.588	0.000

The results indicated that there was a significant difference between the current and favorable status in the seventh axis of the health system development plan. The difference showed a gap between the current and favorable status in the seventh axis of the health system development plan from the participants' perspective.

Discussion

General issues have specific and multifaceted nature. This feature sometimes confuses policymakers and prevents them from providing a clear and structured definition of issues. The political aspects of general issues complicate the issues as much as their purely technical aspects

and it is difficult to discern the causal relationship between them. The problem becomes more serious when policymakers want to evaluate the adequacy of results, such as the effectiveness of the policy, and to predict or judge it. The health system development plan was an inevitable tool against the chaotic and abnormal status of the health sector in the early 2020s. Even though it could affect the health indices and obtain a positive score in the performance of the current by right policy and intelligence, the indices improvement were slowed down and unfortunately stopped in some cases and caused a deep gap between the current and expected status in society. The real process of the health system development plan, if it is going to be fully and correctly implemented, requires the aggregation of available resources, allocation of sufficient and sustainable resources, reformation of executive mechanisms, participation and empowerment of people, and most importantly cooperation and trust of effective organizations. Undoubtedly, were can reduce the gap between the current and favorable status, improve health indices, and provide satisfaction in society and stakeholders of the health system, by focusing on general health policies, prioritizing prevention over treatment, establishing services and referral system, consolidating services of insurance organizations, and strategic purchasing of services, improving the quality and quantity of services for people, reforming tariffs, cooperation of public and private organizations engaged in health, as well as planning based on the real economic power of the government, and avoiding imposing unbearable costs on it. Results of the present study indicated that there was a significant difference between the current and favorable status in the seventh axis of the health system development plan (P: 0.000) that the extent of the gap is in the implementation phase (current status) in the cooperation section (weak gap). The results were consistent with studies of (2, 4, 5).

Fouladi et al. (2017) found that there was not any significant difference between reducing the cesarean section rate before and after the implementation of the development plan (2). The implementation of the health system development plan led to a reduction in the rate of cesarean section at the hospitals. However, the rate of reduction was not in line with the projected goals; and goals of the development plan were not achieved to reduce the share of the cesarean section up to 10% per year. Piroozi et al. (2016) examined the success rate of promoting natural childbirth programs for the health system development plan and found that the rate of cesarean section decreased by 10% in the first year of the plan compared to the average of the previous year. The results also indicated the success of the plan in hospitals of Kurdistan in addition to the improvement of maternal and neonatal health indices (5). According to the results, we suggest examining strategies in the center and implement them in other hospitals to achieve the goals of the health system development program.

In a longitudinal and retrospective study by Afshari et al. on 8510 deliveries in the year before and after the implementation of the plan at a teaching hospital in Tehran in 2015, it was found that the implementation of the health service development plan led to a 6.7% reduction in elective cesarean section, but the hospital failed to reduce the rate of cesarean section (11).

The results were not consistent with the results of studies by Moradi Lakeh et al. (2015) and Jabbari et al. (2015) because they found that the policy of promoting natural childbirth had had an acceptable effect in reducing the rate of cesarean section (13, 14).

Since according to the conceptual model of the research (Savage, 1991), the amount of gap based on pre-set programs and priorities (optimal situation) with what was implemented in the implementation phase (current situation) came in the area of cooperation (low gap). , To improve and achieve the expected goals and strengthen cooperation between the executive units involved in natural breeding in the educational and medical centers of Golestan University of Medical Sciences. Consequently, if the factors that cause non-cooperation between the executive

departments are eliminated, the gap between the current situation and the desired situation will be eliminated. It is recommended that the policies of the Ministry of Health in the Seventh Axis Health System Transformation Plan be implemented equally to free natural childbirth costs in all hospitals and centers, including public and private.

Furthermore, the incorrect implementation of the plan can lead to public dissatisfaction, reduced welfare, the backwardness of the country, etc., and it is important to note that the incomplete implementation of policies should not be attributed only to the implementation stage and the government as the custodian of this stage. Studies indicate that pregnant mothers have insufficient and moderate correct knowledge about the benefits of safe delivery (15); hence, many problems are due to the policy formulation stage and its custodians, i.e. the assembly and other policymakers because the successful implementation of policies is the consequence of the policy identification and formulation stage as much as the consequence of specific implementation and administrative issues. It is suggested that culture building and creating a suitable environment during childbirth to motivate natural childbirth encourage young families to give birth naturally through practical training preparing special packages for children, who include educational booklets for child care and essential items for infants, and donating them to young families.

Limitations available to the researcher:

- Less presence of medical staff at work for missions in the face of the corona epidemic, as well as shifts of administrative staff, which tried to complete the questionnaires through continuous follow-up and frequent visits.
- Later, the distance of rural health houses and medical centers in the cities, which limited access to staff in this department, but tried to solve this problem through cooperation and interaction with colleagues.
- Presence in the medical wards of the hospital, which limited the attendance due to the spread of coronary, tried to distribute and collect questionnaires through interaction with the head nurse in the relevant ward.
- Unforeseen closures during the corona outbreak, especially in the second and third peaks, when the closure of a few weeks practically delayed the distribution and collection of questionnaires from the administrative subdivisions of the education, health, treatment and food departments.
- Fatigue of the medical staff in the face of a large number of referrals to coronary patients, medical staff, including physicians, had difficulty answering the questionnaire.
- The low importance of higher education in the health system transformation plan, in this study, efforts were made to pay attention to the special position of higher education in training human resources needed by medical centers, but the collective will needed to expand the medical education system is low.
- Allocating most other wards of hospitals to coronary patients, this limited access to all wards such as oncology, surgery, orthopedics, etc. to some extent.

Conclusion

The results indicated that the extent of the gap is based on pre-formulated plans and priorities (optimal status) with what is implemented in the implementation phase (current status) in the cooperation section (low gap). Even though the implementation of the health system development plan and promoting natural childbirth was effective in reducing the rate of cesarean section and encouraging families and pregnant mothers to have natural childbirths, the effectiveness was not enough to achieve the goal of the seventh axis of the health system development plan. The greater effectiveness and achievement of the goal of the seventh axis need support, and on the other hand, identifying and analyzing the factors affecting the gap between the current and favorable status. It

also requires creating the culture and a suitable basis to motivate mothers to have natural childbirth including, encouraging families to have natural childbirths through practical training, preparing baby packages containing baby care booklets and essential infant items.

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