

ORIGINAL
ARTICLEInvestigating the Attention to Components of Change in
Health Development Plan from the Viewpoint of staff in two
Hospitals of Isfahan and Kerman in 2015Habibollah Rezaei¹, Shahram Shayan², Zahra Amouzeschi^{3,4}Amrollah Roozbehi^{5,6}, Jafar Nikbakht⁷, Bahareh Bahmanbijari⁸, Amin Beigzadeh⁹✉¹ PhD of Medical Education, Medical Education Research Center, Isfahan University of Medical Sciences, Isfahan, Iran² Assistant Professor, Medical Education Research Center, Isfahan University of Medical Sciences, Isfahan, Iran³ Department of Nursing, Surgery and Trauma Research Center, Birjand University of Medical Sciences, Birjand, Iran⁴ Ph.D. Student in Medical Education, Isfahan University of Medical, Isfahan, Iran⁵ Associate professor, Social Determinants of Health Research Center, Yasuj University of Medical Sciences, Yasuj, Iran⁶ Education Development Center, Yasuj University of Medical Sciences, Yasuj, Iran⁷ Assistant professor, Social Determinants of Health Research Center, Yasuj University of Medical Sciences, Yasuj, Iran⁸ Department of Pediatrics, Afzalipour Hospital, Kerman University of Medical Sciences, Kerman, Iran⁹ Ph.D. Candidate in Medical Education, Health Services Management Research Center, Institute for Futures Studies in Health, Kerman University of Medical Sciences, Kerman, Iran

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Abstract

Introduction: The health system development plan is currently one of the most fundamental changes in Iran. The purpose of this study was to determine the amount of attention to the components of change in health Development plan from the Viewpoint of staff in Al-Zahra hospital in Isfahan and Afzalipour hospital in Kerman in 2015.**Methods:** In this analytical cross-sectional study, the staff of Al-Zahra hospital in Isfahan and Afzalipour hospital in Kerman were selected by convenience sampling method. Data were collected using a researcher-made questionnaire and its validity and reliability were taken into account. Data were analyzed by SPSS version 21 and two-way multivariate analysis of covariance was used as appropriate at a significant level of $p < 0.05$.**Results:** The average rate of attention to the components of change in three factors namely "support and planning", "training and counseling", and efficiency" Were respectively 3.93 ± 0.63 , 2.91 ± 0.86 and 2.3 ± 0.69 . The overall mean of attention to change components was 2.83 ± 2.52 .**Conclusions:** The mean of the total score showed that less attention has been paid to the components of change in the Health Development Plan. We suggest conducting a national survey to identify faulty components and elements in order to take corrective measures.**Key Words:** Change; Health development, Viewpoint; Staff©2017 Journal of Surgery and
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Introduction

The need for change to adapt to external events and development in the organization is essential (1). Today, the need for change and innovation has been identified and no one can ignore the change and innovation for a long time (2). The amount of change can be low to high by its breadth. It can affect many elements of the organization or only a limited number of them. Changes can be made quickly or slowly. The new situation arising from the change can have a completely different nature from the former (fundamental change) or the new situation can be the same as the initial one with its new form and attributes (gradual change) (3).

Most of the causes for change are outside the organization. Factors such as governmental regulations, rivals, new technologies, new customer needs, market forces, and society in general play a role. Occasionally, the factors of change arise from within the organization. For instance, when a new manager is appointed, some goods or services have become obsolete, the new strategic orientation, less profitability of some activities and inflation in the workforce are internal factors responsible for change (4).

Changes are not always easy to be implemented (3). Less than one-third of the changes will have lasting effects, and others will result in a fundamental change that is desirable (5).

Some underlying and organizational factors such as policies and procedures, organizational resources and atmosphere play a role concerning the reactions of employees to the change in the organization (6).

Therefore, models have been introduced to make changes in organizations and individuals with success. The four models of organizational change process are:

Identify objectives (planned change), Life Cycle (adjusted change), Dialectics (change of contradiction), and Evolution (competitive change) (7). The Health Belief Model, the theory of rational action, planned behavioral theory and flexible behavioral model are among the various models for changing behavioral health in individuals (8).

One of the major changes in the Ministry of Health and Medical Education in Health system development plan. Health system development plan has three approaches. 1) reducing the health costs of people, 2) establishing justice in access to health services, and 3) improving the quality of services in hospitals affiliated with the Ministry of Health and Medical Education (9).

The question now is to what extent attention has been paid to the components of change. Getting

feedback to improve monitoring and its evaluation is an important tool. The correct assessment identifies deviations from the program, increases the optimal use of facilities, and resolves the weaknesses as well as strengthening the program. Therefore, the purpose of this study was to investigate the Attention paid to the components of change in Health Development Plan from the Viewpoint of Employees in two public hospitals in Isfahan and Kerman in 2015.

Methods

In this analytical cross-sectional study, the sample included the staff of two hospitals; namely Alzahra hospital in Isfahan and Afzalipour hospital in Kerman. The sample consisted of physicians (Neurosurgery, Physical Medicine, Obstetrics and Gynecology, Radiology, Emergency Medicine, Dermatology, Urology, Pediatric, Oncology, Heart, Endocrine, Infectious diseases, pulmonary, Internal, Pathology, and Nephrology), nurses, midwives, radiologists, laboratory personnel, and anesthesiologists. At first, a list of the available staff in both hospitals was prepared. Due to difficulty in sampling all staff in both hospitals, four groups of staff were selected randomly for comparison.

These groups included nursing staff, radiology staff, faculty members (Obstetrics and Gynecology, and Dermatology). The rest of the staff was then randomly distributed between the two hospitals (8 groups). Faculty members (neurosurgery, physical medicine, radiology, emergency medicine, urology, internal medicine, pulmonary) and midwives were related to Al-Zahra hospital in Isfahan. The faculty members of the Pediatric 's department, Oncology, Heart, Endocrine, Infectious diseases, Pathology, Nephrology, and Laboratory staff were related to Afzalipour Hospital in Kerman.

Then, data were gathered from the staff of selected hospitals using convenience sampling method. The reason for the selection of these hospitals was the availability of researchers to these hospitals and the importance of these hospitals in these two cities. Inclusion criteria were a willingness to participate in the study and having at least one year of work experience. The data gathering tool was a researcher-made questionnaire consisting of two parts: A) demographic information and B) components of change. The questionnaire had 22 items. Respondents were asked to answer on a 5-point Likert scale from strongly disagree to strongly agree.

The content validity of the questionnaire was approved by five medical education experts. The construct validity of the questionnaire was obtained using exploratory factor analysis method. In addition, principal component and varimax rotation were done accordingly.

The criterion for Kaiser-meyer-Elkin's sampling was 0.85. Thus, data were suitable for the analysis of the main components.

The test of Bright Bartlett was significant ($p < 0.001$) which indicated that there was a sufficient correlation between the variables. By using the criterion of maintaining agents whose special value was greater than 1 Kaiser-Guttman, the three-factor solution provided the most obvious extraction. These three factors explained 51.43% of the total variance. Factor (component) one, Support and Planning explained 32.33% of the variance and had 10 substances. The components of this factor included: hope to achieve goals, have a strong support system, run at the right time, Being successful due to past successes, not political project, attention to professional values and beliefs of individuals and attention to occupational safety of individuals, increasing the spirit of the group work, and clear and transparent positioning of people (Questions 1, 7, 8, 12, 13, 14, 16, 20, 21, 22).

Factor (component) two, Training and Counseling, explained 9.98% of the variance and had 9 substances. They included being aware of the necessity and importance of implementing the plan, adequacy of training programs implemented, the existence of a person to answer questions, knowledge about future results, plans, management support, consult and help people in implementing the plan, employee commitment to carry out the plan, and trusting the project executives (Questions 2, 3, 4, 5, 6, 9, 17, 18, 19).

Factor (component) Three, Efficiency explained 51.9% of the variance and had 3 substances (Questions 10, 11, 15). Impose additional costs on the organization, increasing the workload of individuals, and damage to the amount received.

The reliability of the instrument was measured using Cronbach's alpha (88.1%). This reliability for the first factor, the second factor, and third factor was 85.7%, 45.5%, and 85.4% respectively. The level and amount of attention to the components of change in each factor (component) and for the total questionnaire was considered as 3. The researcher collected the data after receiving the letter of introduction from Isfahan University of Medical Sciences and presented it to the authorities of two hospitals.

Thus, after explaining the purpose of the study, obtaining the informed consent from participants and assuring them that their information will remain confidential, the questionnaires were distributed among participants. The time required to complete the questionnaire was 15 minutes. It should be noted that the protocol was approved by the Ethics Committee of Isfahan University of Medical Sciences with the code IR.MUI.REC.2015.2.171.

Data analysis was performed using SPSS version 21 software. In order to compare the attention paid to the components of change concerning gender and place of service, Multivariate analysis of variance analysis (two-way Manova) was used. Test assumptions were also evaluated. These assumptions were sample size, normality, outliers, linearity, homogeneity of regression, multicollinearity, singularity, and homogeneity of variance-covariance matrices.

Results

Of 350 questionnaires distributed, 214 were returned (response rate 61.14%). The mean age of participants was 36.8 ± 9.17 . The mean age of women was 42.7 ± 11.56 and the mean age of men was 35.4 ± 7.79 . The mean age of the studied population in al-Zahra hospital in Isfahan was 39.1 ± 9.49 and the mean age of the studied population in Afzalipour in Kerman was 36.10 ± 8.95 . The average year of service for the whole population was 10.48 ± 7.14 . The average length of service and average work experience for men was 13.8 ± 8.87 and for women was 9.5 ± 6.37 . The mean of the service in Al-Zahra hospital was $12/8 \pm 7/57$ and the mean of the service in Afzalipour hospital was 9.67 ± 6.83 .

The mean of attention to the components of change for three factors of support and planning, education and counseling, and efficiency was 3.0 ± 0.63 , 2.9 ± 0.68 , and 2.0 ± 0.69 respectively. The total average rate of attention to the components of change in this project was 2.8 ± 0.52 . The total average rate of attention to the components of change in this project from the viewpoint of employees in Alzahra hospital in Isfahan was 2.7 ± 0.60 . This rate was 2.8 ± 0.49 for Afzalipour hospital. This difference between the two hospitals was not significant ($t = -1.973$, $df = 235$, $p = 0.05$).

The results of the study also showed that the highest attention was paid to the components of change in the supporting and planning factors related to male staff in Afzalipour hospital with an average point of 3.18 ± 0.44 , and the lowest was for female employees in Alzahra hospital with

2.57±0.84. The highest amount of attention paid to the components of change in educational and counseling factors was related to male staff in Afzalipour hospital (2.94±0.64), and the lowest was for female staff in Afzalipour hospital at 2.75±0.85. The highest amount of attention paid to the components of change in the efficiency factor was related to female staff in Alzahra Hospital in Isfahan (2.48±0.52), and the lowest rate was for male staff in Afzalipour Hospital (1.93±0.65). In order to compare the attention to the components of change for the staff of the two hospitals, two factors were used for analyzing the gender and location of service using two-way variance analysis.

For checking multivariate normality, Mahalanobis Distances was calculated for checking multivariate normality. Because its value was greater than the critical value, multivariate outliers were identified. Only one person was high, so it was ignored. Then the linearity assumption was investigated and the linearity represented the plot. The default of Multicollinearity and singularity was also established. Box's Test Results for Equivalence of the Covariance Matrix (homogeneity of variance-covariance matrices) showed that p-value was more than 0.001 indicating that the covariance matrices of the dependent variables were unequal among the different levels of the independent variables. The results of Levene's Test showed that p-value of each of the dependent variables, ie, support and planning components, education and counseling, and efficiency were 0.000, 0.008 and 0.387 respectively.

Therefore, Conservative Alpha level changed to 0.025. Tabachnick and Fidell (2001) suggested that in case of problems, such as unequal N values and violation of assumptions values for Pillai's Trace are reported (10). (For the genus $F(3, 230) = 5.55$

and Pillai's Trace = 0.068 and about the service location $F(3, 230) = 10.49$, Pillai's Trace=0.120 and P values=0.000. Concerning P-value for each independent variable, the sex and service location was less than 0.05. In order to determine which dependent variable was different from tests of Between-Subjects Effects was used as it provides separate analysis.

The results showed that there was a significant difference between the components of support and planning in terms of gender (p-value = 0.004) and service location (p-value = 0.002), and in the efficiency component (p-value = 0.006). The importance of the gender and service impact on the component of support and planning was evaluated with Partial Eta Squared which was 0.036 and 0.039, according to accepted criteria (Cohen, 1988), it had a very small effect (11). This indicated that only 3.6% and 3.9% of the variance of the components of support and planning component scores were explained by gender and service location.

The importance of the service location on the efficiency component was also evaluated with Partial Eta Squared, which was 0.032. This indicates that only 3.2% of the variance in the efficiency component scores was explained by the service location (table 1).

For the support and planning component, the mean scores for men were 3.08±0.55 and for women, it was 2.65±0.80. For the staff of Afzalipour Hospital in Kerman it was equal to 3.10± 0.54 and for the staff of Alzahra hospital in Isfahan, it was 2.68±0.75. For the efficiency component, the mean score for the staff of Afzalipour hospital in Kerman was equal to 1.95±0.69 and for the staff of Alzahra Hospital in Isfahan, it was 2.27±0. 67.

Table 1: Comparison of the attention to the components of change in terms of gender and service location

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Gender	Support and planning	3.013	1	3.013	8.637	.004	.036
	Education and counseling	.320	1	.320	.674	.413	.003
	Efficiency	1.606	1	1.606	3.421	.066	.015
Service location	Support and planning	3.271	1	3.271	9.376	.002	.039
	Education and counseling	.104	1	.104	.219	.640	.001
	Efficiency	3.574	1	3.574	7.613	.006	.032

Discussion

The results of this study showed that the highest attention paid to the components of change in health development plan from the viewpoint of staff of the two hospitals in Isfahan and Kerman in the second half of 2014 was related to support and planning, education and counseling, and efficiency respectively.

Concerning the support and planning factor, staff believed that this program did not contradict with their professional values and beliefs, their duties and their position in this plan are clear and transparent. Besides, the program does not hurt their job security. But they believed that the program was for the benefit of certain people. There is no sign of group work, it is not implemented at the right time, required facilities were not taken into account, and there is no hope to achieve the goals. Evidence shows that not having enough time to focus on change, lack of employee participation in the change, lack of support and distrust were causes of resistance to change (12).

Therefore, in order to make the change successful, we need to pay attention to these factors. In this context, it should be noted that organizational change means the organization's comprehensive determination to achieve change (13).

In the face of change, if the organization does not have the necessary readiness, it will face failure (14). Therefore, it is suggested that necessary planning is done in this area and we should make sure to consider these things in future programs. According to the results of this study, it can be stated that the benefits of this program are related to the values.

Values are an integral part of personality and social life and without them, human life will be unstructured.

In fact, there are values that direct our lives and without them, there is no incentive to reach the goals (15). As results state that this program is for the benefit of certain people, it can be argued that there is no distributive justice perception in this program. The perception of distributive justice is influenced by the perception of equality and fairness.

It can be said that when employees in the assignment of performance appraisal rank feel fair and equal and receive a promotion and reward based on the results of the fair evaluation (16), their perception of justice will increase and their commitment to the organization naturally increases. Therefore, attention to this issue is

necessary. Also, this program did not increase the spirit of group work, thus, attention to social capital in this regard is effective. Social capital is a set of norms in social systems that promote the level of cooperation of its members and reduces the level of costs for exchanges and communications (17). Trust is a dimension of social capital (18).

Trust may reduce ambiguity and ultimately increases collaboration (19). It is suggested that operational measures be taken to increase the trust of staff in these organizations.

Findings also highlighted that education and counseling in both hospitals were not adequately addressed.

In this case, staff believed that they were aware of the necessity and importance of this program and Managers support the project and trust the executives of the project.

Staff believed that education programs have been implemented in this regard but they are not enough and there was no commitment on the part of the staff to carry out the program. They stated that they were not aware of the outcomes of the project, and their managers did not justify it, and they did not receive counseling and assistance in its implementation. By the same token, an expert was not available to ask help from. Therefore, it is necessary to plan and take actions in this regard.

Staff participation in change planning reduces their resistance (12, 22). They can also be informed by educating and informing people about future outcomes (12).

Reducing the feeling of commitment in staff is one of the disruptive factors in increasing individual productivity and performance (23). Therefore, operational planning is needed to increase staff commitment to this program.

Another finding of this study was the inadequacy of the project's efficacy. In this regard, staff believed that the program did not pay attention to the salaries of the people in the organization and the program imposed an additional cost on the organization. Given that the lack of payment makes people resistant to change (24), there should be operational measures in this regard.

There was a significant difference between the amount of attention to the support and planning component and the efficacy of staff in Alzahra Hospital in Isfahan and Afzalipour hospital in Kerman. This difference can be attributed to the organizational environment and stakeholders in the transformation process, and perhaps the conditions for choosing occupational groups in this study. Rezaei and his colleagues point to the

important role of the environment in influencing the environment on individuals' behavior, affecting motivation and relationship with people's satisfaction (25).

The atmosphere and the environment can vary in any field so it can be close to standards or far from standard (26). Many people are involved in creating an appropriate environment, including the role of managers in this field. Managers can contribute to creating a conducive environment by reviewing the program and paying attention to educational strategies. The manager's controlling behaviors, the contradictory collisions of the manager, the managerial leadership, the manager's trust and communication behaviors have a positive and negative effect on the environment (27, 28). Organizational growth is another key factor for creating a learning environment (29).

Other recommendations that have been made to improve an organization's environment include:

1. Establishment of a committee comprising members of all sections
2. An analysis of the organization's culture
3. Reviewing texts and evaluating existing policies
4. Choosing an effective person for the program budget
5. Time setting
6. Creating a roadmap for the future (27)
7. Running workshops based on the needs of staff (30)

Therefore, it is recommended that maximum efforts be made in these areas. This study is only concerned with medical staff. It is suggested that other health stakeholders be considered in future studies. It is hoped that relevant authorities use the results of this study to take actions for the implementation of future related programs to enhance the health system and to resolve existing challenges.

Conclusions

The total average score of attention to change components showed that the components of the health care reform plan were less than moderate. The overall average rate of attention to the components of change was the same in both hospitals. But there was a significant difference between the two hospitals concerning supporting and planning factors and efficiency. It is recommended that a comprehensive review is carried out throughout the country to identify the defective elements for modification.

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Conflict of interest

The authors declare no conflict of interest.

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