# Evaluation of the dimensions of Organizational Culture using the Denison Model and related factors in employees of the Gorgan Health Network

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## Abstract

**Background**: Organizational culture represents values, beliefs, hypotheses, norms, and goals, which are widely accepted in organizations. The existence of a culture suited to organizational goals in the organization leads to an increase in the efficiency and effectiveness of the organization. The present study aimed to determine the dimensions of organizational culture using the Denison Model and the related factors in the employees of the Gorgan health network in 2021.

**Methods**: The present research was a cross-sectional study. The statistical population of the present study included 188 employees, who were selected through a simple random sampling method from the provincial health deputy, city health center, comprehensive urban health service centers, and comprehensive rural health service centers. The Denison Organization Culture Survey was used to collect data. Descriptive statistics, Pearson's correlation coefficient, independent t-test, and one-way analysis of variance were used to analyze the data in the SPSS software and a significance level of 0.05.

**Results**: The total score of organizational culture was lower than the average value. Except in the team orientation dimension, where the mean scores were higher than the average value, the mean scores were lower than the average value in other dimensions of empowerment, capability development, core values, agreement, coherence and coordination, creating change, customer focus, organizational learning, strategic direction and intent, goals and objectives, and vision. The results showed a significant direct relationship between the number of children and the dimensions of empowerment (P-Value = 0.017), team orientation (P-Value = 0.020), and organizational learning (P-Value = 0.001).

**Conclusion**: Since the level of the organizational culture was lower than the average value, strengthening organizational culture in a scientific, practical, and applied way is necessary.

## Highlights:

**What is current knowledge?**
The existence of a culture suited to organizational goals in the organization leads to an increase in the efficiency and effectiveness of the organization.

**What is new here?**
The level of the organizational culture was lower than the average value, strengthening organizational culture in a scientific, practical, and applied way is necessary.

## Introduction

The importance of culture has increased, and individuals' cultural context reflects their behavior (1). Organizational culture represents values, beliefs, hypotheses, norms, and goals, which are widely accepted in organizations. Organizational culture leads to the understanding of the organization's activities and determines people's behavioral norms. Therefore, managers with the knowledge of the culture governing the organization identify the weaknesses and strengths of the organization and predict the necessary measures. The existence of a culture suited to organizational goals in the organization leads to an increase in the efficiency and effectiveness of the organization (2). Employees' positive performance depends on the beneficial organizational culture. The organizational culture creates a sense of identity and commitment in members that increases the stability of the organization (3). Organizational culture is formed and developed for the internal coherence and adaptation of the organization to the external environment. Organizational culture improves the performance of the organization by increasing the cohesion among employees in the organization and by adapting the organization to changes in the external environment. Organizational culture acts like a "glue" holding the members of the organization together in the organization. Factors affecting organizational culture include national culture, political laws and regulations, history of the organization, mission and vision of the organization, type of employees, technologies and strategies used in the organization, and managers' leadership style (4). Approximately 50 to 55 % of the success of organizational strategies is associated with organizational culture (4 -5). Organizational culture affects the individual behavior attitude, motivation, job satisfaction, level of human resource commitment, design of organizational structure and systems, goal setting, development and implementation of policies, and implementation of strategies (6). A suitable culture with positive attitudes increases employee motivation and loyalty, cohesion and cooperation between employees of different departments, and the organization efficiency. A coherent and strong organizational culture develops organizational creativity, enhances the spirit of teamwork among employees, improves the quality of healthcare services, and increases patient satisfaction (7). Confusion and mental stress, feeling helplessness, isolation, disappointment, frustration and pessimism toward oneself and others are signs of a negative and weak organizational culture leading to a decrease in efficiency and an increase in job dissatisfaction (8). Since organizational culture affects all aspects of life, including work, people's interaction with each other, type of decision-making in the organization, policies, and organizational procedures and strategies, it is crucial to identify the culture governing organizations. In addition, organizational culture gives an organizational identity to employees, affects

people's appearance, reduces external control, causes self-control, and reduces costs and job dissatisfaction (9). Managers of organizations can control employees' occupational and social behavior through organizational culture (10). Healthcare organizations have been exposed to difficult challenges in terms of providing people's health needs. Most of the challenges are concerned with the organizational culture of the organizations. Therefore, evaluation of the organizational culture of healthcare organizations is significant (11). In the present study, the dimensions of organizational culture were determined using the Denison Model and the related factors in the employees of the Gorgan health network to improve organizational culture by providing the results to the relevant policymakers and senior managers.

## Methods

This was a cross-sectional and descriptive-analytical study. The statistical population of the present study included 188 employees, who were selected using a simple random sampling method from the provincial health deputy (58 people), Gorgan city health center (59 people), comprehensive urban health service centers (68 people), and comprehensive rural health service centers (41 people). The inclusion criteria of the present study included the willingness to participate in the study and having at least one year of work experience.

Data were collected using the Denison Organizational Culture Survey (2000). The survey contains 60 questions in 12 dimensions. The dimensions of the survey included empowerment, team orientation, capability development, core values, agreement, coherence and coordination, creation of change, customer focus, organizational learning, strategic direction and intent, goals and objectives, and vision. The scoring of the survey was based on a five-point Likert scale (strongly agree = 5, agree = 4, have no opinion = 3, disagree = 2, and strongly disagree = 1). The validity of the survey was confirmed by experts, and the reliability of the survey was estimated to be 0.88 by Cronbach's alpha.

The researchers were given the necessary training on how to communicate with the participants and record the results in the survey. After coordinating with the authorities and obtaining written permission, the purpose of the study was explained to the participants. The participants were first assured of confidentiality and freedom to withdraw from the study at any stage of the research, and then they completed the survey using the self-report method.

Descriptive statistics (Tables related to qualitative and quantitative data, including number, frequency percentage, mean, and standard deviation), Pearson's correlation coefficient, independent t-test, and one-way analysis of variance were used to analyze the data in the SPSS version 23 software.

## Results

The mean age of the participants was 41.4 years (SD= 7.5). According to the results, the lowest and highest age was 25 and 57 years, respectively. The mean work experience of the participants was 14.45 years (SD= 7.9). The minimum and maximum work experience were one and 30 years, respectively. The mean number of children of the participants was 1.41 years (SD= 0.8). The results indicated that 106 participants were female (55.5 %), and 85 participants were male (44.5 %). The majority of the participants were married (77.5 %) and had permanent employment contracts (61.8 %). According to the results, 162 participants were health care employees (84.8 %), and 29 participants were administrative and financial workers (15.2 %). The results also demonstrated that 72.3% of employees had low satisfaction with their income.

The highest score in the organizational culture survey was related to the dimensions of creation of change (14.81±3.15), empowerment (14.19±3.85), and strategic direction and intent (14.19±3), respectively. The mean total score of organizational culture was 165.54±23.31. The results of the normalization showed that the only in the dimension of team orientation, the mean scores were higher than the average value (0.5). The mean total scores of organizational culture and other dimensions of empowerment, capability development, core values, agreement, coherence and coordination, creation of change, customer focus, organizational learning, strategic direction and intent, goals and objectives, and vision were lower than the average value. Table 1 presents the total mean scores of organizational culture in general and by dimensions in the health centers of Gorgan City.

The results revealed a significant direct relationship between the number of children and the dimensions of empowerment (P-Value = 0.017), team orientation (P-Value = 0.020), and organizational learning (P-Value = 0.001). As the number of children increased, the variables of empowerment (r = 0.17), team orientation (r = 0.17), and organizational learning (r = 0.24) increased. Furthermore, no significant relationship was found between organizational cultures in general and by its dimensions and other demographic and professional characteristics (P-Value > 0.05).

## Discussion

According to the results of the present study, the score of the organizational culture was lower than the average value.

Darabi reported that the organizational culture at Tarbiat Modares University was in an unfavorable category (12), being consistent with the results of the present study.

Mossadeghrad et al., Mirfakhreddini et al., Mobasher et al., Tabibi et al., and Hamidi et al., conducted studies in hospitals of Tehran (4), Yazd (13), Kerman (14), Zanjan (15), and Hamadan (16), respectively. They reported that the score of the organizational culture in the hospitals was at an average level. The results of the studies were inconsistent with the results of the present study. Amiresmaili et al. showed the organizational culture components at Kerman University of Medical Sciences were in a favorable category (17). Sadeghi et al. conducted one study in Hasheminejad Hospital, Tehran. They reported that the organizational culture in this hospital was at a favorable level (18). The results of the studies were inconsistent with the results of the present study. Every organization has its own unique culture. Organizational culture depends on intra-organizational factors as well as cultural, social, political, economic, and technological conditions. A strong and positive culture increases employee motivation and participation, cooperation between employees, and organizational efficiency. Peters et al. showed that superior organizations had a strong and positive culture (19).

Improvement of organizational culture is one of the fundamental strategies of the organization for increasing efficiency. It is possible to easily apply the changes in the system and create new orientations in the organization using organizational culture (20). The organizational culture of any organization leads to an increase in self-control, humanism, and personal growth. Determining the duties of employees in each organization and setting individual goals according to the task of each person cause the individual to feel satisfied by achieving these goals and to exhibit useful competitive behaviors. The creative and unique way of achieving these goals within the framework of organizational rules can create a sense of independence, creativity, and innovation in employees (21). These processes lead to a stronger organizational culture. One of the important issues in reforming the health system and redesigning the structures of therapeutic systems is the presence of a suitable organizational culture. Inappropriate cultures like a blaming, aggressive, and hidden culture lead to the failure of national health systems in implementing reforms and vice versa. Learning public health systems better meet the community health needs and are more successful in improving health outcomes using the results of research, valid evidence, innovation, and creativity,

To change the organizational culture in the health system, strategies satisfactory to the service providers should be considered. The cultural characteristics of the environment, where primary health care is provided, can be effective in service recipients and providers' level of satisfaction (22). The results of the present study indicated that the status of the dimension of team orientation had a better status than the status of the other dimensions, being consistent with the results obtained by Barati et al. (23). Mossadeghrad and Sokhanvar reported less spirit of teamwork in nurses, since nursing managers did not give much importance to the results of teamwork (24).

It appears that group work toward common goals is valued and employees feel responsible exactly as managers do. This type of organization gives importance to teamwork to achieve the desired work result.

Moreover, the goals and strategies of these organizations have been clearly presented to the employees. People's initiative and performance will increase in organizations, where teamwork is appreciated, and their responsibility, independence, and freedom are at a high level (24). Hassanzadeh indicated that teamwork or team orientation was one of the main factors affecting employees' ability (25). According to the results, the status of the dimensions of vision, coherence, and coordination was weaker than that of the other dimensions, being consistent with the results obtained by Barati et al. (23). This result represents the low spirit of cooperation of departments, units, and employees in these organizations. If the organization is considered a system composed of components, integration and cohesion act like an umbrella for these. Coordination means the unity and cohesion of people, groups, and units in the organization to achieve common goals. The low level of coordination in an organization means that the employees of different parts do not have a common vision. Additionally, people's approach to doing work is unpredictable and unstable (26). One of the limitations of the present cross-sectional study was the lack of decisiveness regarding the effective factors. Therefore, the results of the present study can be a basis for future intervention studies. Since self-report surveys were used to collect data, staff and patients may not answer questions honestly for fear of possible consequences. Hence, anonymity and confidentiality were emphasized to overcome the patients' possible tendency toward giving wrong answers. The conditions of the hospital may reduce the accuracy of the participants in answering the questions; therefore, the participants were asked to complete the survey calmly when they were not busy. It is suggested that appropriate interventions should be designed in future studies to improve organizational culture, and the effectiveness of these interventions should be evaluated during periodic and regular studies.

**Table 1. Scores of the organizational culture survey in general and by dimensions in terms of providing health services in health centers**

| Dimensions of the survey | Mean | Standard deviation | Median | Minimum | Maximum | Scores after normalization | |
|---|---|---|---|---|---|---|---|
| | | | | | | Mean | Standard deviation |
| Empowerment | 14.19 | 3.85 | 14 | 7 | 24 | 0.42 | 0.23 |
| team orientation | 13.62 | 3.09 | 14 | 7 | 20 | 0.51 | 0.24 |
| Capability development | 12.83 | 2.70 | 12 | 8 | 20 | 0.40 | 0.23 |
| Core values | 13.81 | 3.33 | 14 | 7 | 21 | 0.49 | 0.24 |
| Agreement | 13.77 | 3.33 | 14 | 7 | 21 | 0.44 | 0.20 |
| Coherence and coordination | 14.32 | 2.92 | 14 | 9 | 25 | 0.33 | 0.18 |
| Change | 14.81 | 3.15 | 15 | 8 | 25 | 0.40 | 0.19 |
| Customer focus | 13.10 | 3.15 | 15 | 7 | 25 | 0.34 | 0.15 |
| Organizational Learning | 14.10 | 3.08 | 15 | 8 | 25 | 0.36 | 0.18 |
| Strategic direction and intent | 14.19 | 3.00 | 15 | 7 | 25 | 0.40 | 0.17 |
| Goals and objectives | 12.78 | 3.53 | 13 | 5 | 21 | 0.49 | 0.22 |
| vision | 14.02 | 3.10 | 14 | 9 | 25 | 0.32 | 0.19 |
| Total score of organizational culture | 165.54 | 23.31 | 168 | 115 | 267 | 0.33 | 0.15 |

## Conclusion

The results of the present study indicated that the mean total scores of organizational culture and other dimensions of empowerment, capability development, core values, agreement, coherence and coordination, creation of change, customer focus, organizational learning, strategic direction and intent, goals and objectives, and vision were lower than the average value. Thus, strengthening organizational culture in a scientific, practical, and applied way is necessary by emphasizing the weaker dimensions.

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## Ethical statement

Ethics approval related to the research circumstances was obtained from the Ethical Committee of Golestan University of Medical Sciences (approval no: IR.GOUMS.REC.1400.432). However, due to the nature of this study, it was exempt from consent to participants given that the study was a non-interventional retrospective one using data in which patient identification information had been removed.

## Conflict of interest

Not applicable.

## Author contributions

NJ: Conceptualization, Project administration, Writing. AH: Conceptualization, Investigation, Writing, Visualization. SMM: Investigation, Software, Writing. ZK: Software, Validation, Data curation, Methodology, Writing. MZ: Project administration, Writing. The author(s) read and approved the final manuscript.

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